The Study of the Religious Meaning of Food towards Value Creation: A Case of Olive in North Africa

著者（英）	KITAGAWA　Tamaki
year	2019
その他のタイトル	価値創造に向けた食の宗教的意味の研究―北アフリカのオリーブを事例に
学位授与大学	筑波大学 (University of Tsukuba)
学位授与年度	2018
報告番号	12102甲第9224号
URL	http://doi.org/10.15068/00156366

The Study of the Religious Meaning of Food towards Value Creation: A Case of Olive in North Africa

January 2019

Tamaki KITAGAWA

The Study of the Religious Meaning of Food towards Value Creation: A Case of Olive in North Africa

A Dissertation Submitted to
the School of the Integrative and Global Majors,
the University of Tsukuba
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy in Food Innovation
(Doctoral Program in Life Science Innovation)

Tamaki KITAGAWA

Table of Contents

List of Tables

List of Figures

General Introduction

1. Food innovation on olive

In recent years, innovation has become a key issue in various sectors of our society, such as economy, investment behavior, and organizational management. Although this term is often used in the sense of *technical* innovation generally (Nihei, 2014), Shumpeter, who used this concept for the first time, determined the term *neue Kombination* (new combination) later replaced by innovation in his writings, to signify the introduction of a new good, a new method of production, the opening of a new market, the conquest of a new source of supply of material, and the carrying out of a new organization (1934/1983, p. 66). This “new combination” is a dynamic concept that could possibly form a new industrial sector through the development and marketing of a new thing, and provide energy to shift the social system and society’s way of thinking (Nihei, 2014). The issues related to innovation have been studied not only in economics and management, but also in sociology (Gopalakrishnan & Damanpour, 1997; Rogers, 2003) and psychology (Amabile, 1983; West & Altink, 1996). The definition of innovation is fluid due to its application in various fields. According to Katz, it can be defined as "the introduction of something new" at its most extensive sense (Katz, 2003, p. 775). Without limiting it to technological innovation or the development of a production method, this thesis aims for the innovation of food by the elucidation of the traditional olive culture in North Africa, based on the classic and the most applicable definition of innovation as the introduction of new combinations in production factors.

Eating food is an experience common to all human beings and involves many different categories of society from individuals to intergovernmental organizations. The level at which innovation occurs can also be widely developed from the production to distribution system, as well as demand-oriented fields such as the market. As the most urgent role of the agro-food sector is the innovation of production technology to cope with the increasing world population (demand), the traditions related to food and agriculture that have been cultivated so far must not be neglected. Toward the realization of a sustainable society, agriculture adapted to the local environment and production methods with low environmental footprint have being reconsidered as alternatives of methods with heavy environmental load focusing on high productivity. The religious cultural meaning of traditional olive production in North Africa examined in this study might have an impact on the global olive oil market, especially on consumer behavior that it has been rarely examined in combination with religious values of olive. The traditional production of olive/olive oil and religious-cultural customs of olive practiced in Tunisia contain the traditional meaning of "food" that can hardly be grasped by modern measures and values. The central question of this research is whether the religious and cultural values related to food hold new value for the modern society, that is, the innovative value of food.

It is believed that human beings have been eating olives since the Old Stone Age, but the cultivation and extraction of oil began around 5000-3000 BC (Zohary & Spiege-Roy, 1975, Liphscitz, Gophna, Hartman, & Biger, 1991; Di Giovacchino, 2013). Until decades back, olive oil was mainly used only in the Mediterranean region and the Middle East, where it had been cultivated since ancient times. Olive oil is currently consumed all over the world and its consumption has seen steady growth. Over the past nearly three decades, consumption has nearly doubled from 1,666,500 tons in 1990/91 to 3,075,500 tons in 2013/14.[1] The production of olive oil responds to demand. Therefore, production volume that was 1,032,000 tons in 1958/59 (Barjol, 2013) grew to 1,453,000 tons in 1990/91, and 3,311,500 tons is expected to be produced in 2017/18.[2] It seems that there are high expectations for the functionality of olive oil in the background of this consumption and production increase. A seven countries study conducted in the 1960s showed the correlation between the Mediterranean diet and the low mortality rate in the Mediterranean region. Since the result showed the lower risk of heart disease with their fat intake in Greece and Crete, the research concluded that their dietary habits caused this lower risk (Keys et al., 1966, Keys et al., 1986). Olive oil, commonly consumed in the Mediterranean region, has drawn a lot of attention since it was reported that the consumption of extra-virgin olive oil was effective for cardiovascular health such as thrombosis and hypertension (Perona & Botham, 2013). In addition to the improvement of cardiovascular systems, its healing properties have been discovered to include anti-inflammation, antioxidant, neurodegenerative disease prevention, cancer prevention, etc. (Perona & Botham, 2013). It is thought that demand for olive oil has increased significantly due to the illumination of its health benefits.

As the consciousness of health in general grows, the concept of "health" is expanding and shifting. Health is no longer seen as simply keeping the body well, instead wellness is more holistic, focusing on social, mental, and spiritual health as well. In the Constitution of the World Health Organization (WHO), "health" is defined as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." In other words, health is achieved not only by medical treatment, but also in a wide range of areas including education, family, working environment, and community where people live. Such an understanding is widely accepted. Furthermore, during the reviewing process of the Constitution at the WHO Executive Board in 1998, the revision of the definition constituted the following alteration, "a dynamic state of complete physical, mental, spiritual and social well-being and not merely the absence of disease or infirmity." According to the explanation, the term "dynamic" was added because "health" is not a static

[1] IOC World and EU olive oil figure-Consumption (Access at November, 2018)
http://www.internationaloliveoil.org/estaticos/view/131-world-olive-oil-figures
[2] IOC World olive oil figures-Production (Access at November, 2018)
www.internationaloliveoil.org/documents/viewfile/4244-production1-ang/

condition of the absence of disease, but rather health and disease are in a continuous state, and the word "spiritual"[3] was also necessary to add because spirituality is essential for securing human dignity and considering quality of life in order to pursuit the meaning of life and living.[4] At a later World Health Assembly, the revisions as such were postponed due to its less urgency, but the movement to regard health as a spiritual thing including pursuit of the meaning of life made a shock all over the world (Larson, 1996; Chirico, 2016; Vader, 2006). Since then, there have been many reports that "spirituality" has been an important factor of "health" in both traditional and religious societies (Durie, 1985; Leclerc-Madlala, Green, & Hallin, 2016, Street et al., 2018), and is effective for keeping physical, mental and social wellness as well as for terminal care (Shah, Frey, Shipman, Gardiner, & Milne, 2018). If we think about "health" beyond the conventional natural scientific position, the viewpoint of religious studies that deal with human spiritual activities is important. The spiritual context of olive usage in the traditional society of North Africa, and how it makes the people “healthy” can be grasped with the framework of history of religions. This position is also very important to recapture the meaning of "food,” which is a fundamental factor of maintaining "health" from contemporary concern.

While worldwide attention has been given to the pharmaceutical importance of olive due to the healthy reputation of the Mediterranean diet, there are not many studies about the religious meaning given to olive in the Mediterranean region. Regarding the northern side of the Mediterranean, the olive was widely distributed throughout the Greek and Roman worlds and was often mentioned in myths and the Bible. Greek classical scholar Boardman (1976) followed the use of olive oil in literature and mythology, while Goor (1966) considered the reference to olive in ancient Hebrew literature. In addition, some books on olives partly examined the cultural dimension (Hehn, 1885; Therios, 2009; Efe, 2012; Giesecke, 2014; Karapidakis & Yfantis, 2006). Olives were emphasized as a tree representing the blessing of God in the Qur'an (6. 99; 6. 141; et al.) or Hadith (Sunan Ibn Mājah, 3320). However, the studies about the cultural and religious meaning of olives in the Islamic world, especially on the folk religious spheres, are less ubiquitous than those of the Christian region.

In Tunisia, where the religion and traditional culture remain relatively intact compared to the other Mediterranean countries, olive is combined with the words “health,” “life,” and “important” suggesting the influence of the olive on health and living, as well as words with symbolic meaning like “blessing,” “merciful,” “sacred,” “queen,” and “like a child” (youthful) (Futatsuyama, 2011). In describing the beliefs and customs in Morocco, Westermarck (1926a, 1926b) pointed out olives were often combined with saint veneration, such as the olive tree showing the saint's tomb, due to the reverence for the sanctity of trees in North Africa since before Islamic dominance (I, pp. 74-75).

[3] Tsushiro, following the argument of Kasai (2003: 124-127, 144-152), mentioned that this term is used both as an alternative of religions, and as a representative of religions (Tsushiro 2011: 40).
[4] https://www.mhlw.go.jp/www1/houdou/1103/h0319-1_6.html (Access at November, 2018)

Dermenghem (2011/1954) argued that olives, especially wild olives, oleaster, are the most revered trees when discussing the saint veneration in North Africa (p. 136). Louis (1975) mentioned the fertility ritual using olive oil and the custom of offerings to olive oil mills in the Demmer mountain chain (p. 323). Abu-Zahra stated that olives are important as the symbol of security in the Sahel region, mentioning that olive "is said to praise God toward heaven" (1982, pp. 187-188; 1988, p. 512). Futatsuyama (2013) argued that olive played the role of embodying *baraka* (blessing) of God according to the religious nature of the product with motif of olive, the customs using olives, and the discourse on olive in southern rural areas in Tunisia (p. 288). However, there are few studies describing the system of olive customs in North Africa, and the information that do exist are dispersed. Only a few of the studies refer to the meaning and structure of olive customs. I try to draw out the cultural and religious phenomena of olive in traditional North African society that have not been studied so far from the information obtained through my fieldwork, which discusses the meaning of the religious experience and the social role of olive by using not only the studies of Islamic sainthood, but the theoretical framework of the history of religions, such as the concept of *Numinose (numinous)* of Otto (1923/1936) and the theory of *arche* of Eliade (1954/1974; 1949/1996; 1959; 1969/1984).

While participating in field observation in South Tunisia, I found that olives are the staple food and the main product of the area. Olives work not only physically or mentally, but spiritually to heal and satisfy the people. Olives are regarded as having sanctity in any state of tree, fruits, or oil. Through a pilgrimage, an olive tree is experienced as an ancestral saint, as a terrible female spirit, or a graceful earth mother; all of these represent a source of life. From these experiences, olive branches, fruits, and oils are strongly seen by people as having the symbolic power of rejuvenation, healing any disease, and exorcism etc., as well as supporting their lives at various stages from birth to marriage to death. The symbols of olive and olive oil recall various powers led by spirituality, such as youthfulness, shining, richness, good harvest, family closeness, marriage, and childbirth. Although it is based on their spiritual experience of nurturing and eating sacred olives, it can be assumed that presenting those religious meanings of olive will also have a certain degree of effect to evoke the images on consumers in the different cultural context as long as they accept olive as food. This will be confirmed with an example of Japanese consumers in Chapter Five. The studies of symbols refreshing the buried spirituality will be a point of contact between religious studies and the field of innovation.

Religious images of the olive are often used in commodities in the Mediterranean region. The owl and olive, which are the symbols of Athena, are drawn in the label of olive oil made in Italy, and trademark combining a saint and olive is used by Greek olive oil. In Tunisia there is an olive oil brand called "Baraka" meaning the blessing of God, and on the label of an olive oil in Israel the figure of David under the olive tree is depicted. From these facts, it is expected that using religious

images for goods is effective for consumers who have similar religious and cultural contexts of the image. While the socio-economic analysis of consumer behavior on the country of origin of olive oil actively studied (Dekhili & d'Hauteville, 2009; Menapace, Colson, Grebitus, & Facendola, 2011; Mtimet, Ujiie, Kashiwagi, Zaibet, & Nagaki, 2011), most of the studies on cultural and religious attributes of products have been on wine (Tempesta et al., 2010; Troiano, Marangon, Tempesta, & Vecchiato, 2016). Research on the religious cultural images and consumer behavior of olive oil has not been adequately conducted. In this study, I examine whether the cultural and religious meaning and the symbol of olive obtained through my field survey in Tunisia could bring innovative value to consumers with cultural backgrounds out of the Mediterranean, exploring the possibilities of reacquiring the religious and cultural meaning of food lost in modern society, especially in the global market. To the best of my knowledge, such research method had never been taken before.

2. Importance of eating in the history of human beings

For individuals who live in modern societies, especially developed societies, getting food is not very hard and easily satisfied; food seems to be rather an alternative for one's personal favor than a purpose of life. On the other hand, if we consider food globally, as the population is growing explosively, food is one of the most urgent global issues. According to World Population Prospects 2017 Revision[5] issued on 21 June 2017 by United Nations, the world population is currently about 7.6 billion is predicted to grow to 8.4-8.7 billion by 2030, 9.4-10.2 billion by 2050, and 9.6-13.2 billion by 2100, thus accounting for a yearly population increase of 83 million people. The Ministry of Agriculture, Forestry and Fisheries of Japan mentioned that the volume of world food production should increase 1.55 times of the current production to feed the extra 2 billion people expected by 2050[6]. Also, the Stockholm International Water Institute pointed that the protein from animal-based products currently 20% may drop to 5% to feed the extra 2 billion people.[7] The issue of a food shortage is nothing new. If we trace the history, food has been always the urgent and primal concern for us. It is obvious by the fact that around 90% of the population of Edo period had to engage in farming to feed themselves and the extra 10 % even in Japan where the rice cultivation was higher productive efficiency than wheat varieties (Sekiyama, 1958, pp. 307-312).

In any region, any times, both for individuals and communities, food supports our life. Due to climatic limits of food production and innovation to combat those limits, indigenous food cultures

[5] https://esa.un.org/unpd/wpp/Publications/Files/WPP2017_KeyFindings.pdf (Access at September, 2018)
https://www.jircas.go.jp/ja/program/program_d/blog/20170626 (Access at September, 2018)
[6] http://www.maff.go.jp/j/zyukyu/jki/j_zyukyu_mitosi/pdf/base_line_bunseki.pdf (Access at September, 2018)
[7] https://www.theguardian.com/global-development/2012/aug/26/food-shortages-world-vegetarianism (Access at September, 2018)

have been created in each region in accordance with their existence. In a hunting and gathering society, most of the effort had been spared to collect unpreservable food in each season. Because unstable food supply could not support big groups of people, small groups had to move around mountains, forests, and fields to seek new sources for hunting and available wild plants. For hunter-gatherers, food is something beyond human's control. As well as the risk of human origin such as lack of technics, their lives are easily exposed to the menace of harsh natural conditions that are unmanageable by humans such as travels of quarries, depletion of edible wild plants. For them, food is indeed the nature itself that beyond human beings. Thus, hunter-gatherers generally have beliefs of animal deities, or beliefs of a master (mistress) of animals who controls them to provide edible food for humans.[8]

When societies started agricultural life, people could produce their own food for the first time by selecting the productive plants among wilderness, and cultivating them. However, cultivation meant a barbarous conduct, for hunter-gatherers, of striking into the sacred earth with a hoe, a deed they regarded as blasphemous for the earth (Eliade, 1959, pp. 138-139). Due to such reality, the Hainuwele type of creation myths in which earth mother or earth goddess is murdered and cultivated plants begin to grow from her body, can be found among old planters (*Altpflanzer*) based on a basic plant cultivation (Jensen, 1963/1951, pp. 107ff. ; Eliade, 1959, pp. 138-139). While agriculture brought humans a new idea of the cycle of death and rebirth, it also enabled them to settle down in one place and to compose bigger groups. Through technological innovations, such as river management or use of animals, food productivity has improved. The increase of food reserves that caused the centralization of population in turn promoted civilization. In this sense, the birth of agriculture was a definitive moment in the history of humans leading up to present modernity. Despite this, the mission of food acquisition has been often in danger by climate issues, disaster, or disease of plants, animals, and farmers. The stable supply of foods is a continuous need for humans, and many efforts have been put forth for this task, such as innovation of agricultural implements, breeding improvements, development of chemical fertilizers. On the other hand, the indigenous food cultures resulted to natural conditions to obtain food, efforts and innovations against the conditions have promoted, sustained, and transformed peculiar religious meanings.

3. Approach of history of religions

The value of edible plants is based on their nutrition; however, nutritional aspects have not always expressed the meaning or importance of edible plants or food because they often did not have such framework of understanding. To understand the meaning and importance for them, the approach of history of religion is appropriate. This is because human beings had grasped and

[8] Please refer to the general idea of master (lord) or mistress (lady) of the animals in Zrries "Lord of the Animals" in *Encyclopedia of Religion* (edited by Eliade, 1987, NY: McMillan) vol.9, 22-25.

expressed the world in religious sense for a long time before the modern scientific idea permeated people's mind. The religious sense of humans which had been developed for thousands years is still remaining among us.

The fact that the most of population had been engaged in farming in the pre-modern societies, means most of the people lived with their primal issue to gain food. To eat is almost equivalent with to live, and the object of our life has been food. Thus, "important things" for humans such as happiness, completeness, or ideals, have been expressed with food in many instances. For example, "land flowing with milk and honey" (Exodus 3:7-8), transubstantiation of bread and wine, Asircepnomi the festival of salmon arrival of Ainu, Bacchanalia of Ancient Rome, or the custom to eat *mochi* (rice cake) or *sekihan* (red beans rice) in ceremonial occasions deeply combined with the idea of "Hare" (Sacred) in Japan. To understand the meaning of food for human beings requires the premise that the meaning of food for premodern person contains metaphysical ideas compared to the meaning of food for contemporary one.

The approach to food by the history of religions can release the meaning of edible plants and food itself for the human beings from the framework of sociological reductionism, and provide the hermeneutics based on the human existence. This is possible because the history of religions is "a total discipline" that should integrate the results of anthropological, historical, political, ethnological, literary, and scientific approaches to religious phenomena, and that quests for the religious mode of being in the world and that is the ontological meanings of humans (Eliade, 1984, p. 8).

The subject of the history of religions cannot be limited to doctrines, myths, or religious orders that are regarded as "religion" in popular understanding. The scope of the history of religions has a wider range, looking at subjects such as ethics, religious teachings, *unio mystica*, practices of rituals or festivals, literature as religious poems, people's wish for healing, and world peace. The primary mission of the history of religions is to study the religious phenomena as widely as possible, and to grasp common traits among all religions. The history of religion was established as one of "empirical science," independent from theology in 19th century. The empirical science was from its beginning, divided into two categories; *Geisteswissenschaften* (Science of Spirit), which covers spiritual phenomena of human behaviors such as philosophy, history, linguistics, literary studies; and *Naturwissenschaft* (Science of Nature), which covers natural phenomena detached from humans and artificial things (Tanatsugu, 2015, p. 143). Wilhelm Dilthey, the founder of *Geisteswissenschaften* tried to overcome the dichotomous understandings of the world and humans and sought the foundamental image of humans through hermeneutics. His ideas influenced the development of the phenomenology of Edmund Husserl and the history of religions. Both phenomenological and hermeneutical approaches have been combined as methods for the study of the history of religions and contributed to constructing its disciplinal view.

As mentioned above, the history of religions has a decisive mission to investigate something

unique (*sui generis*) to religious phenomena. One of the most prominent influential scholars of the discipline, Rudolf Otto, inspired by Luther's experience of God, pointed out that the meanings of "the sacred" entail a distinctive irrational element beyond a rational ethical element. He named it *Numinose*, which is explained as "non-rational, non-sensory experience or feeling whose primary and immediate object is outside the self." *Numinose* that is experienced with a terrifying and fascinating mystery stays in the core of any religion, even of the highly developed and moral-added Christianity (Otto, 1936). Gerardus van der Leeuw who succeeded Husserl's phenomenology and the hermeneutics of Dilthey declared for the quest of meanings of religions the necessity of the phenomenological approach that sought a third entity between an objective fact and subjective evaluation, that is, significances and meanings of phenomena. For that, he brought a phenomenological approach of *epoché*, suspension of judgment by natural standpoint, into the history of religions in order to explain phenomena in terms of its own inherent system of meaning (Leeuw, 1979).

Influenced by Otto's idea of numinose, Mircea Eliade employed a new category of *hierophany* that meant a manifestation of the sacred, to classify religious phenomena from other phenomena. Analyzing various symbols of sky, water, moon, and time cross-culturally, he aimed to group various forms of hierophany and to explain the structures underlying them. Eliade discussed that something sacred manifested itself only through something profane, and called such supplemental relation between the sacred and the profane the dialectic of the sacred. With such structure, the profane world becomes the sacred by ritual repetition of cosmogonic paradigm and the world recovers its own significance by this. He interpreted this model as the "myth of eternal return." According to Eliade, every religious phenomenon, searching for archetypes, has a subject of return to the "mythical age" (the cosmogonic moment in mythology), that is, a subject of return to archaic ontology in its fundamentals.

In this study I discuss the symbolism of olive as sacred tree, but there are arguments that such religious phenomena are "animism" or "worship of trees" (Takaki, 2000; Dukinfield Astley, 1910). When dealing with the sacredness of tree as well as other natural objects, we confront a question whether it is an abode (or a vehicle) of holy being such as a god, a spirit, mana or anima, or a tree itself holds the sacredness. There are cases where a divine resides in trees like *sakaki* in Shintoism, and sometimes it is sacred itself as Aboriginals have faith in rocks and trees to be reincarnation of their ancestors (Frese & Gray, 1987). In some cases of the sacred olive trees in Tunisia, it is explained as a place where a spirit lives, but those spirits have their peculiar names and appear only in a specific tree respectively that is called in the same name. The other sacred olive trees in the area are explained as that the tree itself is a particular saint or a particular spirit. In fact, the distinction of whether it is an abode or a sacred existence itself is very delicate, and it may be explained as an abode while they treat it as existence, and vice versa.

When discussing *kwoth*, the concept of god (spirit) of the Nuer tribes, Evans-Pritchard asserted that natural objects themselves were not considered to be a god. However, in the creation myths of the Nuer tribe, the people believe the tamarind tree called *Lic* in the country of Jagei of western Nuer land is a mother who produced human beings, and it is clear that the tree itself is considered as a divine existence (Evans-Pritchard, 1956, pp. 2-6). What complicates the problem is the gap between "the understanding of nature" of the person who interprets religious phenomenon and that of the actors. It should not be considered that people practicing "natural religion" share the modern view on nature, the mechanical materialism based on pure physical principles. If the natural things that Evans-Prichard supposed ("sky, moon, rain, and so forth in themselves") are independent autonomous entities separated from any symbolic linkages, of course the Nuer people would not recognize it as a god.

Under the religious perception, the world consists of a complex of various symbolisms such as the creation of the universe, the center, the source of life, or the paradise, and any natural objects present in the world are not considered to be autonomous and separated from them. In other words, for religious understanding, there is nothing that is simply and completely secular such as "just a tree" or "just a rock." On the other hand, the sacred is not always disclosed, but it presents itself in a limited place and a limited time. There is a rupture between the sacred and the mundane world we live. Eliade explained this contradiction with the concept of *hierophany*. The sacred never appear directly, but it always appears in the secular objects as stones, trees, scripts, or human beings. As repeated in festivals and rituals, the homogeneity of the popular time and space is broken by the manifestation of the sacred, which reveals the existential "fixed point, the central axis" for all orientation. When the sacred manifests itself, it also brings "revelation of an absolute reality, opposed to the nonreality of the vast surrounding expanse". With the new fixed point to see the world, the world is given the new meaning (sacralized), and re-created ontologically. Recognition that the world until then is "nonreality" occurs by emerging of stronger "reality" than that. Also, the fixed point obtained at that time will become old later on, and it will lose "absolute reality". The essence in hierophany is breakthrough by "revelation of an absolute reality", not its content. Therefore, the world is repeatedly broken through, and a new sense of reality must be obtained (Eliade, 1957, p. 20-24).

To understand human existence expressed in each religious phenomenon and to investigate the religious meaning of food, this study tries to interpret the particular religious phenomena related to olive tree in South Tunisia based on the ideas, definitive goals, and terminologies of history of religions.

4. Studies on food in the history of religions

It is hard to imagine for the present generation who can get food as his/her will, that a state with

full of food is regarded as a blessing, or a manifestation of supernatural power, as shown in the episode of feeding five thousand people with five loaves and two fishes in New Testament (Matthew 14:13-21; Mark 6:31-44; Luke 9:12-17; John 6:1-14). Thus, in the premodern world, a state of full of food, or feast, was considered a special time different from normal time, in which people could communicate with ancestors, spirits, or deities. Ritual meals of each caste in Hinduism, offering dumpling to ancestral spirits in East Asia, *Nīnamesai* or harvest ritual by Japanese emperor, sheep of *Eid al-Adha* of Islam, bread and wine in the Eucharist are all examples of the fact we still have customs to eat specific food in specific occasions. In traditional societies where those customs originated, food in rituals or festivals was regarded as "primordial food" of every daily meal and eating or offering "primordial food" could be momentum for people to contact deities, gods, spirits, ancestors saints, or the underworld, that is, the sacred. Also, foods, especially staple foods are related to deities in many societies. They are expressed as deities representing food e.g. Ōgetsu-hime of cereals, Demeter of wheat, Devi Sri of rice, Salmon boy, Corn maiden, Dionysus of grape, as the deities of natural elements who bring harvest e.g. Zeus of weather, Hapi of River Nile, Ganga of River Ganges, Gaia of the Earth, or as the foods that have divine origins e.g. fruits of knowledge in the Garden of Eden, above mentioned Hainuwele, Cintéotol a corn deity of Aztec mythology, Sedna a mistress of marine animals of Inuit. These multitudinous cases show the importance of food and that the sacredness of foods have been expressed in each region by each manner. Food has religious significance because the most primal way to communicate with the world is eating, and eating is a direct behavior that represents humans' mode of being in the world.

Although there are plenty of examples of foods in religious sphere such as divine foods mentioned in myths, offerings of rituals, social connectedness by communal dining to communicate deities and ancestors, as well as recent arise of religiously regulated food like Kosher or Halal, the meaning of food had not been fully studied theoretically within the discipline of history of religions. It may be because we have too much information and too many variations of religious phenomena related to food, and the study of the primal meaning of food itself has been considered as a subordinate subject to studies on classical doctrines or on mythologies (Norman, 2012), since the status of food in classical societies are subordinated by higher and more abstract principles, such as justice, righteousness, virtue, and so on.

In contrast, food has been clearly stated in the center of cultures and religious symbols of indigenous societies. Thus, through the discipline of cultural anthropology, whose main subject is pre-civilized societies, the importance of food for indigenous spirits has been studied significantly. Alfred Ernest Crawley pointed out the religious regulation of food was designed for fair distribution of foods and discussed taboos of food in relation to the sexes (Crawley, 1908-1926; 1911). Claude Lévi-Strauss clarified the identification of food and life in "primitive societies," and developed his methodological dualism inspired by their dichotomous understanding of food as "raw" (nature) and

"cooked" (culture) (Lévi-Strauss, 1964/1983). Also, William Robertson Smith and Mary Douglas provided the theory on food in the discipline of history of religions. Smith, who worked on the origin of ancient Hebrew religions, discussed the importance of feasting for the development of communal identity with the reference to community's relationship to its deity. His functionalist interpretation was succeeded by a school of the sociology of religions such as Emile Durkheim. Douglas discussed communal identity as maintained by their idea to keep purity by fasting or forbidding specific foods. Her study was so influential that the main concern of anthropological studies on relation between food and religion is dominated rather by food restriction as taboo or precepts, than by festive aspects, such as Smith proposed (Norman, 2012).

Through the analysis of religious conduct described in the medieval writings, Caroline Walker Bynum found that foods for the medieval Europeans were not simply a source of pleasure that should be restrained for religious world denial, but "also an occasion for union with one's fellows and one's God." Any banquet was based on the "prototypical meal" as the Eucharist for their commensality. The experience of unity with God was not occupied only by limited number of mystics, but rather any person who was given a meal with its prototypical meal of the Eucharist could also have such experience according to her understanding (Bynum, 1987, p. 3). From the viewpoint of gender studies on contemporary Moroccan societies, Marjo Buitelaar mentioned that the participation of women to official positions through the religious activities of "fasting," "cooking," and "giving food" during the season of Ramadan can give an opportunity for women to uniquely interpret formal Islam by their own references. Likewise, her work shows the active participation of women and their central roles in the pilgrimage to saints and olive trees, although they are normally "invisible" in official Islam. We can further observe the more frequent contribution of women to the religious structure in seasonal and occasional instances of pilgrimages in Tunisia, in addition to the instance of Ramadan.

Focusing on the meaning of food in sacrificial rituals, Malamoud indicated that all sacrifices were conducted in the manner of cooking in ancient Hinduism and that any sacrifice was an imitation of the archetypical sacrifice of the world creation by Prajāpati the Creator (Malamoud, 1996, p. 23-53). Brāhmaṇas as manager of rituals sacrificed the world for human beings and by sacrifice they "cooked the world." By the fire that was an action of Agni the fire god, the object of sacrifice was transformed through the process of sacrifice (cooking), and became something belonging to deities. They had to perform sacrifice since "that which is cooked, indeed belongs to the gods" (ŚBr. 3.8.3.7). In this sense, food that humans consume is sacrificial food that is, "humans eat only the reminder of the sacrificial meal" (Berger, 2012, p. 3). Also, Philip Arnold argued that the creation of the tie between divine world and the people, as well as that of the landscape and the people by an act of eating by decoding the sacrificial rituals for Mexican rain god, Tlaloc. Arnold described the ritualistic world of Aztec as giving the "fruits of the human body" of child sacrifice to

Tlaloc, the god reciprocates humans with earth, water, and plant life so that they can "eat the landscape" symbolically and eat maize (Arnold, 1999, p. 159-161).

The essence of sacrificial action shown in the above studies to eat the sacred and to be eaten by the sacred, is also observed in the sacrifices and pilgrimage rituals in South Tunisia. This study inquires as to what the sacrifice or rituals bring to individuals and communities, that is, the meanings that these actions create for them.

5. Contemporary meaning of food

Generally, we think of our modern society as independent from religious meanings and existing without mystical realities. This understanding has been formed through the process of "secularization" that started with the political slogan for the priority of the secular authorities to the religious authorities in 17th century western Europe. It expanded the secular sphere on literary and philosophical disciplines, then concluded as the ecclesiastical initiatives in the European societies decreased (Webber, 1930/2005; Berger, 1967). Since the 1960s when secularization was constructed as a theory, Luckman and Wilson claimed that modernization did not extinguish the religions themselves. Religions would survive through modernity only in private spheres although they would lose their social significance of managing the societies (Luckmann, 1967; Wilson, 1966). However, several religions started to take public roles in the 1990s, such as revival of Catholic Churches in South America and Eastern Europe and rise of religious fundamentalism in North America and Islamic countries. These phenomena were called "deprivatization" by Casanova (Casanova, 1994). Recently, new spiritualism, such as the mind fullness that originated from Buddhism, has spread to the public spheres of education and politics and started to form a dominant culture in western Europe and United States (Ito, 2015).

Social changes effected the evaluation on the theory of secularization, and it finally came to the thorough negation of the concept of "secular" by Asad as with its own unity (Asad, 2003, p. 16-19). Needless to say, the criticism on the theory of secularization, religious understandings or concerns for religious things unconsciously permeate our daily lives. As fortune telling on morning TV programs or magazines, tours to famous shrines and temples or annual ceremonies, popularity of "power spots," symbolical function of national flags or national anthems, Tetraphobia or Triskaidekaphobia (Avoidance of unlucky numbers), we are surrounded by numerous irrational orientations and unexplainable rules.

Likewise, food is generally evaluated by the scientific aspects of nutrition or medicine, or the physical aspects of personal favors. However, the demand for foods that follow religious regulations, such as Halal or Kosher, seems to be increasing not only in Islamic countries, but also in North America and Europe. Also, veganism based on "Ahimsa," the Jain idea and practice for nonviolence, is expanding in many western countries. The root of this movement is claimed not as dietary

veganism practiced for health, but ethical veganism based on the morality against the consumption of animals in the form of products (Stepaniak, 1998). The fact that religious values have certain influences on the recent trend of food consumption and food supply seems incontrovertible.

Even in a society like Japan where the practice of food regulation based on religions is not found, people still have religious ideas of “Hare” (Sacred) and “Kegare” (Profane, Polluted) unconsciously regarding food. According to Gardella, the absolute preference of domestically produced rice is because most Japanese think of rice produced abroad as polluted or inferior based on the above ideas (Latham & Gardella, 2005). Under the progress of health-oriented lifestyles, people focus on fasting that originated in religious practice. Furthermore, phrases such as “Beer Festival” or “Meat Haven” in secular advertisements gain our attention because we have images of havens and festivals full of food and drinks. In short, we do not perceive “food” as “secularly” as we think we do. Consciously, we are concerned with religious spheres, and unconsciously our lives are subordinated to our religious understandings at certain levels. As I mentioned above, food has been given metaphysical meanings in pre-modern societies, even in modernized societies people seemed to have sought religious meanings of food. If people still live on the religious orientations unconsciously, it may be possible to regain metaphysical meanings of food that had once been lost. The analysis on the consumer behavior regarding religious cultural values in Chapter Five explores the possibilities of the recovery of the metaphysical meanings in the modern foodways.

6. Fieldwork

For this study, I have performed fieldwork nine times in total on the following dates: August 20th–30th 2014, December 1st-7th 2014, July 14th-30th 2015, May 14th-25th 2016, July 19th-28th 2016, and December 7th-9th 2016, January 10th-22nd 2017, May 13th-20th 2017, and August 2nd-14th 2017 in Tunisia. The interviews were implemented in English, Arabic, and Amazigh with the help of translator for Arabic and some Amazigh natives in local areas. The first two fieldwork were applied to a preliminary survey with the questionnaire sheet about olive-related knowledge on the six categories of traditional songs, rituals or customs, symbols, myths or legends, taboos, folk medication in the governorates of Tunis, Sousse, Monastir, Gabes, Medenine, and Tozeur. The existing traditions and customs related to olives were hard to find and knowledge about the disappeared customs were collected in the northern cities of Tunis or Sousse. Some of the interviewees in those places had never heard of such traditions. Although they had lost the specific images of olives, the discourse still remained among them that olive had a special significance for them. Even those who did not know any specific information of the traditional imagery of olive, made an assertion that olive is the life of Tunisians. But it was not easy to find the living traditions on which those discourses were based. Among the answers of the questionnaires, the information that was collected in the mountains of the governorate of Gabes indicated that they still practiced

Interview sheet for the research on
Symbolism of olive in Tunisia and its transformation

Name（Age）: Mr. / Ms. _____ (years old)
Date : 2014/_____/_____ Place : _____

<Songs>
Do you have a special song for olive?
Do you have a special song when olive is harvested?
Do you have a special song of marriage on olive?
If yes, when and where it can be observed?

<Rituals, customs>
Do you have special ritual with olive, olive oil or branch or twig?
Do you have special occasion to eat olive for specific purposes such as wedding, birth, festival etc.?
If so, are there any differences with daily eating?
Do you have specific custom to eat olive for pregnancy or for happiness or protection?
If so, where it can be observed?
Do you have special usage of olive to prevent evil or asking for good spirit (Mlaika) or purification?

<Symbols>
Do you use olive symbol for a specific purpose such as fish for good luck?
If so, does it have special place, occasion or person to be put?

<Story and sayings, legends>
Do you have a local story related to olive?
Do you have any saying that olive is effective for casting away evil spirit?
Do you have a story about the magical power of olive?

<Taboo>
Do you have any local prohibition related to olive such as for cutting old tree?
In this case, is there any story of punishment because of the conduct?

<Treatment>
Do you have a magical treatment with olive such as to tie a cloth of the sick to the tree…?
Do you have a traditional treatment or usage with olive?

<Saints>
Do you have veneration to a specific saint?
How to visit his sanctuary?

Figure 1. Questionnaire sheet

"olive culture." That is the old village where Amazigh language is spoken daily, and the place is isolated due to the strongly conservative and independent mentality and the infrastructure had remained under developed for a long time after the independence. I had focused on the village and the communities around it to conduct my main fieldwork. For the primary fieldwork, open questions were performed with the villagers based on the above six categories and observation of pilgrimages and the lives of the village citizens including festivals, ceremonies, and rites of passage. I collected demographic information including age, sex, occupation, family members, marital state, and tribal

affiliation. Then the target of the study was focused on the veneration of the olive saint complex, and the annual festival. The total number of interviewees was 244; 7 in Tunis, 16 in Sousse, 23 in Monastir, 33 in Medenine, 12 in Tozeur, and 153 in Gabes (21 in village B, 42 in village M, 20 in village Z, 70 in village T). For the open question interviews, the interviewees were selected from both sexes who had their own life mainly in the community such as housewives or someone with his/her occupation inside the community. This was because there is a skeptical and negative tendency among the villagers who work outside the village about their indigenous olive customs although the gaps of sex or age did not make big difference on their attitudes. For the effective information, the main interviewees became women accordingly, who are more likely to stay inside the village than men. This idea fulfilled the theory that women are the main actors of pilgrimage and saint veneration.

Modernization and urbanization are major factors on traditional customs to be damaged or transformed at best. Another influential factor that I had to be careful of during my work was Islamism, or Quranic literalism in a broader sense, since any form of saint veneration is denied by such a position. Provoked by the Ennahda party, Islamism that had been suppressed under the secularized policy of Ben Ali, spread over the country. From 3000 to 6000 Tunisian are said to become Jihadis, Islamist soldiers fighting in Syria and Iraq (Watanabe & Merz, 2017). The terrorist attacks and clash with the national army happened often inside the country. At that time, the influence of new religious political ideals of the Salafists, who claim to revert to age of first three generations (salaf), was expanding from the cities to local societies.

Certain numbers of the middle to young generations who work or study in the cities seemed to accept the fundamental claims of purity as a leading fashion of thought if it did not involve violence. Such opinion was not found among those who live permanently in the village during the fieldwork, but persons who work in the cities and occasionally came back sometimes claimed that there was no such custom to visit the olive tree, or such custom is a complete deviation. Also, some people did not like their family to talk about the olive saints. The negative attitude seemed to be not only because of his religious political position, but maybe because of a shame or an inferiority complex for such “primitive” traditions, or an anxiety to open their “naivetes” of his family to a foreigner. They seemed to be anxious about the risk of being attacked by Salafists on their sanctuaries or their families. The subject of this study, including saint veneration and several elements of pre-Islamic religion, can be also the target of attack by Islamists. Thus, in this study, all the names of individuals and communities are kept anonymous.

7. Outline of the chapters

Firstly in Chapter 1, I take an overview of the symbolic manifestations of olive and olive oil in myths, legends, and customs in the Mediterranean region and biblical traditions. It is possible to

analyze and classify them into certain types of symbols as grace of god, vitality, power and center, or more dominantly, fertility. The beliefs of the olive and the olive tree as symbols have existed widespread of the region under the various religious and cultural influences. Also, I will examine olive-related customs that are widely common in North Africa based on the comparison between the early 20th ethnography in Morocco and the results of my fieldwork.

Chapter 2 demonstrates how saint veneration is connected with natural objects and how saint-associated natural objects obtain their symbolic meanings and functions at certain sanctuaries along the border between Arab and Amazigh villages in South Tunisia. Do the practices represent the modification of the pre-Islamic beliefs into saint veneration rituals, enabling them to exist within monotheism? I will take a consideration both cultural influences on the different level of involvement of natural objects in saint veneration.

Chapter 3 explores how olives receive veneration with from the actions and relations to olives in the Amazigh village in South Tunisia. This is examined from their pilgrimage rituals, daily lives, kinship, and consecutive advent of spiritual beings. I also discuss the peculiar social and religious function of the belief of olives through different levels of saints from human to semi-human, or more spiritual being. Is it possible to consider the pilgrimage to olive trees as agricultural ritual? This chapter reveals the role of old olive trees to enable the people to have total experience of pre-Islamic and Islamic values through short local pilgrimage.

Chapter 4 focuses on the traditional agriculture, and dietary and medicinal culture of olives in the villages of South Tunisia and examines how the importance of olive as dietary resource in various living aspects is expressed in agricultural festivals. Olive cultivation in South Tunisia is very limited in its quantity and the productivity due to the low rainfall and the difficulty of large-scale irrigation. Thus traditional olive farming and processing methods are still preserved. In this society where life and production processes are not separated, table olives and olive oils contain not only value as a product but also as a culture, so their indigenous food culture has been inherited. While the traditional dietary usages of olive have been re-recognized with their functional value proved, some of the dietary culture and folk remedies are used due to their symbolic function of bringing about fertility and having magical effect. Mahrajan, a new festival emerged as an agricultural festival whose core was the ritual of donation and communal eating of olive the community parade of an olive shoot. Several aspects of the life of olive farmers are expressed in a condensed form in this festival.

Finally, Chapter 5 discusses the possibility of the religious and cultural values of olive oil to be new added values, which are learned in the above chapters. Ample studies have examined the impact of religious cultural background of consumers on their preferences. Shavitt & Cho (2015) analyzed the consumer behavior of each cultural region from the brand strategies of their markets. Moschis and Ong (2011) examined how the consistency of consumer brand and store preferences is

influenced by consumers' religiosity. Also, numerous studies have discussed the religious cultural aspect of products, mainly on wine (Tempesta et al., 2010; Troiano, Marangon, Tempesta, & Vecchiato, 2016). However, little has been studied on the impact of religious cultural attributes of olive oil on consumers' choice. By presenting the religious and cultural meanings given to olive in the Mediterranean region, we examine the influence of the information to the people who do not have a tradition of olive cultivation on the evaluation of olive oil products.

Chapter 1: Symbolism of Olive in the Mediterranean Region and the Customs in North Africa

1. Introduction

About 6000 years before, the cultivation of the olive has been developed and the olive and its products have been one of the most important sources of human nutrition in the Mediterranean regions. It is widely seen in our history and prehistory that an indispensable element of basis of life of human conducts including habitation, food, sex, and the surrounding nature as the earth, the sky, water etc. have been bestowed the symbolic meanings. Olive is no exception for this rule. Its harvest and usage are crucial for the people living in the region and the amount of the olive production has had a strong effect on their lives and existence due to its nutritional and economic values. It inevitably has the connotation for them that a plant itself has the crucially important power so olive becomes to have certain symbolic meanings inseparably connected with their usage. In this chapter, I take an overview of the symbolic manifestations of olive and olive oil in the Mediterranean and North African regions through the varieties of myths, fables, sayings and customs which show how olive relates to the lives of the Mediterranean inhabitants. In spite of the religious, ethnological and cultural varieties in the history of the area, olive remains the center of the Mediterranean trading, and for this reason, it keeps its significance even if it has changed its meaning through social changes and modernization. According to the method of the history of religions, the hermeneutics of religious phenomena, the symbols related to olive are compared with some general symbolism such as fertility, sacred tree and cosmic axis, and discuss on its continuity and transformation.

2. Nature and function of symbols

"Symbol" is a meditative object which represents the meaning of things, actions, status, nature, relations, ideas and so on. It takes form of concrete things such as signs, words and gestures. When I take it consideration, it is important to focus on the relation between a symbol and what a symbol indicates. For example, a symbol of arrow mark shows a certain direction. The word "apple" represents a certain fruit. However, if I would talk about the religious symbols, signs and symbols must be distinguished. Symbols represent uncertain relatively unknown multiple meanings although signs, as showed above, represent definite single meanings. For example, the sign of the sun that is commonly used in weather forecast means the sun or sunny weather, on the other hand, the symbolism of the sun contains the multiple, ambiguous and pervasive concepts such as the sky, energy, power or indestructibility.

The function of symbols is to abstract a meaning from a being, and a *signifié* (signified) that is signified by symbol as a *signifiant* (signifier) is thus, a being. Apart from the medical meaning, a symbol of heart (a heart shape) is a certain meaning abstracted and modified from the nameless being of "heart" pertaining to matters of a body and spirit. People can use this symbol easily and

simply than the unexplainable being of a heart itself without any difficult ambiguity.

The religious symbols are classified into 8 types of sounds, myths by oral traditions, beliefs by oral tradition, gestures (rituals) in addition to the three basic classifications of symbols as natural materials, artifacts, and abstract symbolic patterns (Comstock, 1972). Among them, the symbolism of nature is very universal compared with artifacts, abstract symbolic patterns, or gestures, and is hard to be suffered from cultural regulations. It can be said that it shows the universal existential condition of human beings, and thus it is directing what is fundamental to human beings. Symbols, especially religious symbols tend to connect with other symbols and to make certain systems because symbols, or images never be autonomous but can have meaning only after they are linked deeply to each other. This tendency is often seen in the natural symbolisms such as symbolism of tree, water, fire, mountain, sky, and earth. Symbolism of plants is closely associated with many other natural symbols such as the symbolism of the sun, symbolism of the earth, symbolism of water. Also, there is no culture that has no symbolism of plants, it means that there are diverse symbols in the symbolism of plants. Eliade categorized the symbolism of tree into several features such as “cosmic tree,” “cosmic image,” “vitality,” “fertility,” regeneration of plants, symbol of rebirth of a year, and a mysterious relationship between man and trees (Eliade, 1949/1996). The symbols of olive are found to be applied to some concepts among them as follows.

3. Symbolism of olive in the Mediterranean region

3.1 Olive in myths

Olive is one of the oldest cultivated trees in the world (Liphschitz, Gophna, Hartman, & Biger, 1991). Roman Agronomist Columella called olive “the queen of all trees” (Forbes & Foxhall, 1978), it shows how the cultivation of olive and the extraction of its oil have been the major livelihood in the Mediterranean basin. The favor and special position of olive was endowed by the Greek and Roman mythologies that formed the basis of the Mediterranean traditions.

Athena, one of the most famous goddess in the Greek pantheon, was called the goddess of olive crop, who brought the Athenian the cultivation of olive. It is well known myth of the origin of the that the competition between Athene and Poseidon for the possession of Attica (Athens). Both of them insisted the possession of Attica, so they gave a gift to it each. Poseidon created the salt water spring by striking the hill with his trident. Athene on the other hand, arrived to the city with Cecrops, the king of Attica as a witness, and created young olive tree just besides the salt spring. By the arbitration of Zeus, Athene was given the possession of the city and gave her name to it. In this myth, Poseidon is the sea god who brings on the flood and there I can see the same paradigm of creation from the water as in the Genesis.

Figure 2. The contest between Athena and Poseidon, red figure hydria, 350 BC

The myth of origin of olive cultivation by Aristaueus seems more ancient than Athena (Valavanis, 2006). According to the epics of Pindar and Apollonius, Aristaeus, the son of Apollo and Cyrene the nymph, was a rural deity who taught people the arts of hunting, herbalism, dairy products, bee-keeping, brewing, and olive cultivation and pressing. This cultural hero was born in Cyrene where his mother is the foundress of the city in Libya. Grown up and taught many arts by nymphs, he learned how to cultivate oleasters (wild olive) to make them to give better fruits. His name is spread as a guardian deity of the cultivation of olive to many places of Greece and the Mediterranean islands of Sicily or Sardinia, or Kea, where he traveled to teach his knowledge to the people.

Olive had the attributes of peace and victory as described in the above myth, the victory of intelligence. Eirene (Irena, Pax in Roman myth) is a goddess of Greece to Rome, who is one of the three sisters of Hourai. Each of the goddesses represents a natural portion of time and bring and bestow ripeness, and Eirene represents Spring and its seasonal fruits. She is a goddess of peace and brings seasonal fruits. She is seen in the pose of holding her arm, cornucopia (a horn with plenty of fruits) with her left hand and olive branch in her right hand. The branch of olive of Eirene shows

Figure 3. Goddess Pax (Eirene) holding olive branch (Fiske, 1839, p. 439)

peace and fertility but this symbol also contains the more offensive meaning. Mars, the war-god also has the olive branch in a coin of the later Roman Empire and it means power to control the enemy in peace, that is Pax Romana. This quality of olive branch can be seen even in the beginning of Greece myth.

In the Olympic games of the ancient Greece, the sacred oleaster at Olympia, exactly near to the temple of Zeus who is patron of the Games, had a great significance to bless winners with its wreath on their heads. According to the tradition, the son of Zeus, Heracles started to bestow a wreath of oleaster that is the most honorable prize for athletes. Also, in the games of Panathenaia, the festival of Athena, olive oil produced from the sacred olive tree of Athena in her Acropolis, said the first olive tree in the world as the above mentioned origin myth, was given to winners of the games as a prize. The affinity between athletes and olive can be considered as the symbol of strength. Olive oil was commonly used by athletes to keep their body clean and strong as well as other people. Also, olive tree is combined with Apollo the powerful sun god, and with many heroes. Apollo was born under the sacred olive tree that existed in Delos. When his mother Leto gave birth near to the trunk, its leaves turned to gold. The sacred olive trees growing near the tombs of heroes such as Erechteus or Hyperborean Virginsin Delos, together with myth of the sun god, the prize of olive and oleaster wreath and olive oil to athletes, are the symbol of "endless power of rejuvenation in nature" and "immortality" (Faklaris & Stamatopoulos, 2006). It is because athletes are the embodiment of human's physical power and strength, and the heroes were regarded to have something divine in his/her existence as well as the sun god. This power of rejuvenation seems to be originated not only in olive but in tree in general, as a power of rebirth of a life of vegetables. As I see in the later chapter, numerous traditions contain the custom to put a tree near to a tomb, to lie down a tree to be healed, or to visit a tree for refreshment. In ancient Greek, olive was the most particular tree to express such power of tree in general.

Among many deities, Athena, the guardian goddess of ancient Athens where the cultivation and import of olive oil was notable had strong relation with olive. Addition to the sacred "first" olive tree in her temple, it is obvious with her portrait with olive leaves inserted in her helmet on the front side, olive branch with a fruit by side of an owl on the backside of a tetradrachm, Athens silver coin equivalent to four drachmane. The series of the rituals on the festival of Panathenaia in summer was considered as following the agricultural year of the cultivation of olive (Haland, 2012). Arrephoria is the one of those rituals, which was held in the night by virgins of Athena to carry unknown things on their heads to the underground and bring another unknown thing to the temple. This was the last task as servers of Athena who are annually replaced, and it worked as their rite of passage. According to Haland, this ritual is "to secure the dew that was necessary during the months from then until the time of harvest if the fruit was to grow to an adequate size (Haland, 2012, p. 273)." and the important relationship between olive and dew is shown as Athena's sacred olive tree in her Acropolis

was situated in front of the temple of the dew goddess, Pandros.

Figure 4. Tetradrachm of Athens

In the myths and mythological rituals, olive is depicted as a gifted plant from deities, which brings about the vitality such as toughness in salt water, fertility to the man, and strength and rejuvenation to heroes. Additionally, I can find the strong connection of olive and power, so it includes the symbolism of "Center" which comes from the cosmogonic images of olive.

3.2 Olive in Bible

In the biblical tradition which was born in the eastern coast of the Mediterranean basin, olive holds great significance. In the Old Testament, there are many mentions on olive and olive oil accounted as property, the promise with God, and purification. Moses's dream of the Promised land as "land of olive oil" in Deuteronomy 8.8 is included in the covenant between God and Islaelites, expressed with the image of heavenly place where no one would be starved. In Levitcus 8.10-12, Moses was commanded to anoint Aaron and his sons, then "he sprinkled thereof upon the altar seven times, and anointed the altar and all his vessels, both the laver and his foot, to sanctify them." As well, Jacob performed similar ritual following the vision he had. "And Jacob set up a pillar in the place where he talked with him, even a pillar of stone: and he poured a drink offering thereon, and he poured oil thereon" (Gen. 35.14). The olive oil was used to sacralize alter or a pillar to be suitable for God's presence. The custom of sacralization of the divine places possibly originating in Canaan (Kambanis, 2006), as well as anointment, shows the symbolic function of olive oil to make something pure, something unsullied, something very newly born, possibly originating to its cleansing and shining effects and the symbolism of water. This function led the later usage of olive oil as Chrism or Myrrh, and as to purify and cast away evil spirits.

The most influential symbolic image of olive in the bible may be the olive branch with which a dove returned to the arch after the great flood. It symbolizes the youthful vitality, energetic tough evergreen and the restoration of relations and peace between Man and God which was once broken. The myth of great flood is seen in several places e.g. Orient, Europe, America, India, China… as a mythical image that the world has come into existence from the primordial water. So, the flood means the return of the world into the primordial, the pre-creational state of water. The olive branch

which springs from the water is the image of the new born world. It involves the images of pillar, that is the central axis, and the image of "emersion from the water" that means the formal manifestation from the formless chaos. Because the world which is symbolized by olive branch in this description, is born very newly, it is totally in peace and harmonized.

Figure 5. Noah and a dove with an olive branch (Kambanis, 2006, p. 126)

As well known, Messiah means the Anointed in Hebrew, with olive oil. The holy oil turned to be called Chrism, then a person who is anointed by Chrism turned to be called Christ meaning Messiah. Olive oil was very commonly used to sacralize someone in both Testaments, and in recent rituals also. It is not only olive oil but oil in general that has a power to sanctify a person. There are many examples which show the direct relation of anointment and rituals for example in India, Greece, Ancient Egypt, Central America. Kings of ancient Orient, or shaman in India become someone special with anointment. It may because of the archaic sensitivity for the effect of oil to make their skin beautiful and shiny, to make them younger. That is why oil shows the vitality, godliness, power, and revival and it partly show the reason why olive is a symbol of power and vitality.

In Zeccharian, two olive trees in Israel is mentioned, that produce oil to light Menorah, the seven-branched candelabrum, from right side and left side of it. The "two olive branches, which through two golden pipes empty the golden oil out of themselves" are explained as representing the two sons of quality as the king and the higher priest in the line. "These *are* the two anointed ones, that stand by the Lord of the whole earth." Here, the Lord of the earth is symbolized by Menorah, who is to enlighten the people and lead them to the right path of God. Olive trees symbolizes two roles who guide the people to the being by giving oil on him as well as the two themselves are anointed.

3.3 Olive in Quran

There are six parts where olive is described in Quran. Four of them are almost same theme that God showered benefits upon us, gave the harvests of grains, green plants fruits and olive (6.99, 6.141, 13.11, 80.29).

> He it is Who sendeth down water from the sky, and therewith We bring forth buds of every kind; We bring forth the green blade from which We bring forth the thick-clustered grain; and from the date-palm, from the pollen thereof, spring pendant bunches; and (We bring forth) gardens of grapes, and the olive and the pomegranate, alike and unlike. Look upon the fruit thereof, when they bear fruit, and upon its ripening. Lo! herein verily are portents for a people who believe (6.99).

Olive which was given by God's will is a special *baraka* as same as the other plants He gave, and man are supposed to receive such *baraka*. This kind of expression is Monotheistic re-interpretation of the significance of olive harvest which was very important and symbolic for Mediterranean people. With this, people have become possible to express how olive is important for them even at present. Among these descriptions, Chapter 24, Verse 35 is an exceptional, it is very visionary, profound, mythical and therefore, many Muslim theologians like Al-Ghazali or Rumi have interpreted it.

> Allah is the Light of the heavens and the earth. The similitude of His light is as a niche wherein is a lamp. The lamp is in a glass. The glass is as it were a shining star. (This lamp is) kindled from a blessed tree, an olive neither of the East nor of the West, whose oil would almost glow forth (of itself) though no fire touched it. Light upon light. Allah guideth unto His light whom He will. And Allah speaketh to mankind in allegories, for Allah is Knower of all things (24.35).

Here in this sentence, olive is expressed, in the layers of symbols, as a symbol of the light of God. The lamp keeping the light of God is set on the olive tree like a star in the sky. The light of God set on the olive tree as cosmos, the light of lamp in the sky becomes to be set on houses and lead the faithful people. It is significant that the olive tree and its oil are described as cosmic tree and symbol of ultimate Light.

Both of this unlit light upon the blessed olive "neither of the East nor of the West" and the light of Menorah sided by two olive trees of Israel indicate what light universally means for us. Light means what shines, illuminates, or brightens something. Because the above Lights share the quality of God's power or knowledge, they mean the witnesses or the illuminator for the people to the kingdom of God. From a viewpoint apart from the contexts of the teachings, light or fire is a symbol

of life, and represents a state of living. The well-known folk tale of candles of life edited by Grimm brothers as “Godfather Death” seems to be originated in the Greek myth that every mortal has an oil lamp in Hades. If the lamp runs out of oil, then the person in question dies (Kambanis, 2006, p. 142). The equation of individual lives and fires on lamps can be understood as in the same manner as what Bachelard mentioned on fire. Citing Novalis’ phrase “a tree is a flowering fire, a man is talking fire, and an animal is wondering fire,” he determines that fire symbolizes actions of life. In other words, the meaning of fire for human beings is the existence of living thing (Bachelard, 1988/1961, pp. 43-44). With the reference to the symbolic meaning of fire, the meanings of olive oil as lighting oil in the holy books, and of folk belief to use olive oil of cressets in churches to cure diseases become understandable. Olive oil is the ontological fuel to energize our lives, as well as fire of the life of olive tree. Olive tree produces olive oil that pours to our fires (life), and thus the tree is understood as the source of the source of our life.

4. Olive symbols in modern North Africa

In Tunisia, olive is the symbolic tree. Olive has been cultivated and been the main item for Mediterranean trade since before Phoenician period. Even now, the Exportation of olive oil takes important part among Tunisian economy. The most famous mosque in Tunisia is named Jami'a al-Zaytuna, Mosque of Olive Tree, after an olive tree once it was there in the ancient worshipping place before the construction of this mosque, or after Christian saint St. Olivia of Palermo who was martyred and buried in the place. The image of Christian martyred saint who had miraculous powers to heal is over-raped by the image of an olive tree. Many other things, companies, shops agencies were named after olive. Another example is olive branch curved on a current Tunisian coin so it can be said that olive tree or olive oil takes a certain role as a symbol in Tunisian culture. For example, the miniature of olive tree is easily seen in a house with its metallic stem and branch and fruits of incent paste. People have a habit to give it for wedding gift or housewarming. This custom is of course not only for decoration but for the symbolic meaning which olive tree has, such as the symbol of the center of cosmos. Thus this miniature tree is usually put in their main room of a house that is the microcosm of the world. It contains the symbol of fertility which derived from the fruitfulness of olive tree and people give it to bride and groom for wishing they will be blessed with many children.

To know the root of these images of olive shared among contemporary Tunisians, their traditional customs related to olive are discussed in next section. It is necessary to find their qualities whether they are originally Tunisian characters or common to other countries in North Africa, by comparing the recent customs in Tunisia with that of early 20th century in Morocco described in the ethnographies.

4.1 Beliefs, customs and symbolic meaning of olive

An indispensable element of basis of life is bestowed the symbolic meaning under their existential situations, so olive is no exception. It is natural that olive itself is regarded to hold the crucially important power because the production of olive is crucially important to their lives according to *principe de participation* (Lévy-Bruhl, 1910). The core values of olive in this region have been expressed in customs, beliefs and rituals which can be seen with certain act or symbols. To grasp the religious meaning of olive, it is required to reconsider man's religious sensitivity for trees as the sacred which is beneath the religious and spiritual cultures. Tree is regarded as "the first temple of the gods" (Dafni, 2006), which symbolizes the cosmos. Sacred tree characterized almost every culture and religion where trees were capable of growing. The image of tree also "express life, youth, immortality, wisdom" that is, everything "real and sacred" (Eliade, 1957/1959, p. 149). Although the religious meanings and customs of olive in North Africa obtain the uniqueness, surely they are parts of the entire tree veneration which can be observed all over the world.

In this section, I draw the comprehensible image of olive in North Africa which is remaining through various cultural influences such as Roman or Islam, by comparative analysis with the result of my field work in Tunisia in 2014, and the early literature of European scholars on North African customs (Westermarck, 1926a, 1926b, 1933). Here I can find a wide array of relevant customs, so three categories according to their function are led, Exorcism, Purification, Ritualistic tools, Medium of powers and Fertility, Blessing.

4.2 Exorcism and purification

In addition to the anointment which is common to Judeo-Christian-Islamic traditions, olive oil is used for purification by dropped into fire to cast away evil eye and curses in daily life in Tunisia. There, olive oil takes an exorcistic role as same as *bukhōr* (incense) has. Also the small bottle filled with oil and water is put in a house for "good luck," and "protection." As traditional therapeutic treatments, disease has often been put on the piece of materials and transfer it to the other things or places. Olive tree is used for that in North Africa. In Morocco, the practice of tying a string to the branches in the grave of a saint were popular to transfer an illness to an olive tree because they have *baraka* (blessing) (Westermarck, 1926a, p. 556). In village BN, Tunisia, people said they used to put a wet cloth on a forehead with fever, then tie it to an olive branch to calm down the symptom. It was also done for headache and rheumatism by older generation. Generally, object of transfer can be both an olive tree and a saint.

When hunting, olive branch as a whip was used to cast away evil spirits in Morocco (Westermarck, 1926a, p. 409). Also in Tunisia today, olive is popular as a charm for protection from evil eye, and for good luck. In village TZ and village BN in the governorate of Monastir, the olive branch in the shape of Y is put on a gate. They are mentioned it is same as the meaning of *hamsa*

(Fatima's hand) as pointed shape against evil eye. This protection is not effective with fruitless branch, so it must be fruitful one. It means, the protective power derives from its procreativity and it can be a kind of sacrifice.

4.3 Ritualistic tools and medium of powers

In rituals of Morocco, olive especially olive branch is used to reinforce the power of spell and increase the effectiveness. A piece of olive wood on which a chapter of the Quran is written, is used to cause many deaths to animals (Westermarck, 1926a, p. 121). The love charm is also practiced by tying it to an olive tree with a hair of a woman to control her mind (Westermarck, 1926a, p. 361-362). In Tunisia today, people whisper their wishes to any cotton rag with the holy phrase, and tie it to an olive tree branch. They also explained it is more effective if the cotton rag is fluttered by wind, so they put it on an outside twig. It can be both sympathetic and contagious magic as well.

As same as certain type of saints, olive sometimes possesses chaotic and dangerous powers. For example, if *baraka* is excess, it becomes very dangerous. When pressed olive oil or honey increases by itself, it is called *qazquza*, uncontrollable excess of *baraka*. If it is happen, the animal sacrifice must be performed (Westermarck, 1926a, p. 220). Also in a local story of village T, Tunisia, a female *jinn* (*jinnīya*) of an olive tree threatened the people and asked them for animal sacrifice. So they offer sheep in *Eid al-Adha*. Olive can be medium of such ambiguous powers as same as general function of other ritualistic tools, and it is used for both beneficial and unfavorable purposes.

4.4 Fertility and blessing

Strongly connected with its cultivation, olive is considered as a symbol of fertility and used for the wish for prosperity of descendants. According to the report of rain ritual in Tunisia, rain and olive with sexual metaphor can be seen in the sermon and fruitful olive tree is called "that has given birth" (Abu-Zahra, 1988). In marriage ceremony in Djerba, a groom slaps a small boy with olive branch, or a bride does a small girl wishing their children will be married soon (Futatsuyama, 2013). Among villagers in Tunisia, the custom of eating olive oil in order to enhance their procreative power is quite popular as same as reported in Morocco (Westermarck, 1926a, 1926b). Also, in a wedding ceremony of village T, a groom carries a stick of olive wood shaped like a male sex organ even to their bedroom to show his "manliness." These symbols or symbolic acts are explained to obtain God's grace (*baraka*) or just a lucky thing in this region, but they are also based on the agricultural sensitivities for the similarities among the birth of plants and human beings, because there are numerous similar customs containing similar gestures all over the world which enables people to be given the vitality and fecundity of plants.[9]

[9] In Japan, very similar gesture to slap young wife's hip is practiced for fertility in the rituals of *sainokami*, or *saenokami*. Also the symbol of male and female genitals are often venerated in shrines and

As same as *ziyara* (visit) to a grave of saints, olive farmers in village T and Zarzis enjoy visiting old olive trees for the harvest festivals and rain rituals and these trees are called in particular names as same as saints e.g. Camour Brel, or Lella Fatma as I discuss in later chapters. The cult of saint and agricultural ritual is very close in Tunisia because of the flexibility of saint worship among

	customs and sayings	sources	features
1	Names of God are written on the olive leaves	(Pagan 109)[10]	Islam
2	Olive tree as a saint's grave	(RBM I 68)	saint
3	A large stone and a wild olive tree, called in the name of saint prayed for the baby	(RBM I 69)	saint
4	A miracle-working olive tree on the grave of saint; sick people relieve themselves of their complaints by tying a woollen string to one of its branches.	(RBM I 75-)	healing, saint
5	A cairn at the root of an olive tree known under the name of saint	(RBM I 76)	saint
6	An olive and a fig tree which had grown together so as to make one tree, and its leaf has a power to cure the fever.	(RBM I 77)	recovery from illness
7	A large grove of old olive-trees with *baraka*, fragments of clothing are tied for certain purposes.	(Fogg 102)	saint, *baraka*, magic
8	Olive oil is drunk by men in order to enhance their procreative power	(RBM I 107)	fertility
9	Pregnant women eat olives so that the child shall be good-looking	(RBM I 107)	fertility
10	An olive stick is sometimes said to keep away evil spirits	(RBM I 107)	purification
11	Causing death of animals by writing a surah on a piece of olive wood	(RBM I 121)	magic
12	Sprinkle the holy water with olive twig to cure the patient bitten by a mad dog.	(RBM I 157)	healing
13	Strange lights seen on an olive tree	(RBM I 162)	*jinn*, saint
14	Olive oil is gifted to saint for the purpose of the good harvest of the next.	(RBM I 172)	fertility
15	Animal death by eating olive leaves from the memorial tree of a saint	(RBM I 190)	saint, *baraka*,
16	Writing sticks from wild olive trees of saint in order to remember it	(RBM I 200)	*baraka*,, magic
17	Increasing the stock of eatables by visiting a saint's olive grove to eat together.	(RBM I 202)	fertility
18	Sacrifice of animal when the new-pressed olive oil is increasing	(RBM I 220-)	*baraka*,
19	*Jinn* keep away from a person who has in his hand an olive stick.	(RBM I 310)	purification
20	Tying charm to an olive tree with a hair of the woman to control her mind.	(RBM I 361-)	magic
21	Throwing the sticks of olive with chanting to cast away the devil when hunting is in vain.	(RBM I 409)	purification
22	To prevent the evil eye, reciting "His eye at the wild olive tree, neither money nor children" by uplifting the five or two fingers.	(RBM I 446)	evil eye

Table 1. Olive-related customs in Morocco and that common with Tunisia in gray

temples for agricultural fertility and family prosperity.

[10] Pagan: Westermarck (1933) *Pagan Survivals in Mohammedan Civilization*. London: MacMillan, RBM: Westermarck (1926) *Ritual and Belief in Morocco* vol. I and II. London: Macmillan, Fogg: Fogg (1940) "A Moroccan tribal shrine and its relation to a nearby market," *Man, 40,* 100-104.

other Islamic practices (Takaki, 2000). Further, it seems the personalization of olive tree because they symbolize the close relationship between tree and man after many generations.

By comparing the customs of recent Tunisia and of Morocco in one hundred years before, I discovered the similar customs are practiced in each of three categories. As shown in the figure, the half of the customs and beliefs that were collected in Morocco are found practiced in Tunisia still now. Therefore, I could confirm that there is common understanding on the symbols and rituals of olive in North Africa, at least in the region between Tunisia and Morocco including Algeria. Besides, it is possible to assume the certain level of the commonality in Libya also since several informants from Tataouin and Tozeur mentioned the places of olive veneration in that country.

4.5 Transformation of olive custom

Multiple social elements such as increase of a literacy rate, diffusion of Quranic doctrine, decline of village communities, and the destabilization of the economic and political situations, have influenced the traditional customs considerably. These customs shown above can be seen still now in rural areas in Tunisia but these traditional values are inevitably facing the difficulty to survive. However, some cultures related to olive remain popular e.g. songs. Also, in cities of Sahel which is famous for olive cultivation, there are many monuments of olive and olive sector. Most of the informants who live in Tunis and Sousse cities do not have much idea about the traditional olive customs but they can share the oriented image of olive such as “essence of life” even without direct contact to the traditional customs, and also can define it as their own cultures.

Generally in Tunisia, the gap between urban and rural area is considerably big and the customs are kept among villagers. The Government-led international festival of olive, has a role to harmonize them. In the festival of Kalaa Kebeira, the conservation of traditional values in technical and cultural senses, and the promotion of modern olive sectors are intended. With these activities, olive is kept as the symbol of their culture in the sense of harvest and fertility which is suitable both for Islamic doctrine and modernization. Traditional customs are practiced as long as economic and social circumstances allow and there are two poles of the motivation for the practice, that is, to follow “what ancestors did” and to utilize them as cultural resources. Although the traditional customs of olive in Tunisia has no more influential to prescribe their whole lives, they adopt the customs which is adequate to the contemporary situation and determine their attitude to that.

5. Conclusion

It is possible to classify them into certain types of symbols e.g. grace of god, peace (purity), vitality (fire or light), Cosmic Axis (center, domination), or fertility. The belief of olive and olive tree or branch as a symbol has existed widespread of Mediterranean Region under various religions and cultures. These symbols have been modified and changed the meaning slightly with the

adaptation to the new cultural influences. The religious function of symbolism of tree such as sacred tree or plant rituals is to express the vital cosmos which repeatedly re-birth. There the everlasting life is shown. For the archaic ontology, it becomes an expression of the Absolute Being. When the light of God is set on the olive tree, olive becomes the symbol of God. However, it is possible to say that the symbolization of the thing which is essential for a life of a people, is inevitable even though it is unified into new system, and this is the way they grasp and express how important it is, and how does it makes them to live.

The olive related customs the customs possibly categorized into three groups according to their functions, “Exorcism and Purification,” “Ritual tools and Medium of powers,” and “Fertility and Blessing,” still exist. Those observed in early 20th century Morocco have largely in common with those recently practiced in Tunisia. Although it is fragmented in the modernity, there are structures on symbolical understanding of the world that gives meanings on their lives in traditional communities (Geertz, 1993/1973; Turner, 1969; Eliade, 1957/1959). But the traditional values are inevitably facing the difficulty to survive because of the modernization and the population outflow to cities. Urban dwellers can share the information oriented image of olive without direct exchange with traditional values, and also can define it as their own cultures.

Chapter 2: Saint Veneration with Symbolism of Nature in South Tunisia

1. Introduction

The veneration of nature is at the foundation of the history of human beings. In primal forms of religion, natural objects such as trees, forests, mountains, and oceans have a great significance as the sacred and often present themselves as deities. From the perspective of the long history of religions, the sensitivities to nature is much more basic and prevalent among many religious cultures than monotheistic teachings, which abstract such beliefs. However, even though monotheism restricts belief in the sacredness of natural objects within its doctrine, the symbolism of natural objects and beliefs in their power have persisted, concealed through various modifications, and have supported the development of monotheistic religions. Even within Islam, which has recently been characterized by a heated rise of fundamentalism, people have continued to practice religious activities in which nature is venerated and to regard these as Islamic religious practices. These have been modified into practices of saint veneration to reconcile them with monotheism, and have retained their own unique characteristics through their fusion with Amazigh culture, which has existed since long before the invasion of the Arabs into North Africa (Doutte, 1984/1909; Gellner, 1969; Crapanzano, 1973; Bel, 1938). Saint veneration at many sanctuaries in North Africa emphasizes the connection with nature. This chapter aims to demonstrate how saint veneration is connected with natural objects and how saint-associated natural objects obtain their symbolic function at certain sanctuaries along the border between Arab and Amazigh villages in South Tunisia.

2. Categories of saints

Sainthood in Islam is not endowed by any religious authority, unlike canonization in Catholicism; instead it is determined by unspecified people who commit to the saint's veneration. The qualities that make a person a saint are not only faithfulness but also unusual power to heal disease, to bring about a good marriage, or to grant a petition; above all else, a saint should have some quality of a sacred reality whether they are dead or alive. It is obvious that as well as to saints, people feel the closeness to the nature surrounding their lives and feel the reality beyond a human scale of the natural objects which exist far longer than a person's lifetime. This could be expressed as veneration of sacred mountains, sacred trees, or sacred land in a polytheistic culture. In Tunisia, however, religious sensitivity toward natural objects has been altered into a form that can suit Islam in various degrees.

There are several main frameworks for discussing saint veneration, which is widely observed in North Africa. Otsuka has critically expanded Waardenburg's idea of "official Islam" and "popular Islam" into "Islam of the intellectuals" and "Islam of the people," with the latter said to include saint veneration (Otsuka, 1989; Waardenburg, 1979). Akahori (1995) construed the two poles of social

classes in the religious practice of Islam as wide sociality and sophisticated intelligence respectively. He claimed that this bipolarity is theoretically contained within the beliefs and practices of all Muslims. In general, saint veneration is categorized within one end of the continuum; the "small tradition," "popular Islam" or "wide sociality". Even Sufism, the most sophisticated form of saint veneration, is regarded as an uncontrollable element that works under a different system from "authentic" or "authorized" Islamic doctrine. For this reason, saint veneration has kept its characteristic tolerance, which permits it to include pre-Islamic or "pagan" elements.

The presence of "pagan" elements within Islamic culture such as the veneration of nature has already been mentioned and discussed by several European scholars (Smith, 1889; Canaan, 1927; De Bunsen, 1910; Doughty, 1921). On the relations between saint veneration and nature veneration, Takaki has pointed out a certain influence of animism on saint veneration in south Tunisia (2000, p. pp. 183-184,), and Dermenghem has claimed that the personality or action of a saint can effect or initiate the veneration of natural objects (1954, p.137), whereas Westermarck has argued that nature worship often disguises the form of saint veneration, thus nature worship generally precedes saint veneration (1926a, pp. 74-75). The poor organization of the scholarly discussion the veneration of natural objects and saints seems to have developed because of the broadness of the terms and the many varieties of forms of saint veneration. As Gellner has pointed out, the concept of "saint" includes "a few fully personalized saints, more semi-personal ones, and still more wholly impersonal ones" (1969, p. 285). Any discussion of sainthood in Islam must consider the diversity and ambiguity of the concept of sainthood, as shown by the range of Islamic saints from known descendants of the Prophet and noble missionaries whose lives are recorded in hagiographies to impersonal saints such as natural objects or spiritual beings.

Kerrou has categorized the characteristics of the people from local Tunisian history who are regarded as saints as (a) ascetic scholars (*ālim-zāhid*) in the early times, (b) monk-warriors (*murābit*), (c) master saint (*cheikh-walî*), (d) saints of Sufi sect (*walî-tariqa*), and (e) mystic madman (*majdhūb*) (1998b, p. 224). The saints whose veneration I noted in my survey of the villages of South Tunisia do not fit into categories (a), (b), (d), or (e)[11] because they are found in the limited villages between Arab and Amazigh cultures, so it is difficult to find historical heroes of martyrs, early ascetics, or Sufi of *tarīqa* (sect). Based on this previously accepted categories, but customized them to fit the local legends and practices of veneration, I propose the four new categories of "Missionary saint," "Local saint," "Ancestral saint," and "Spiritual saint" to more accurately classify the saints venerated in my study area. "Missionary saint" is a person originally from abroad or other region who visits the place for religious study and fulfilling the mission of Islam, and this saint can serve to convey the

[11] Only Sidi Thāmal in village B fits the category of (c) master saint (*cheikh-walî*) among my survey. Because the evidence on the master saint is not enough, this category is included in "Local saint" for efficient analysis.

proper idea of Islam to the local community. On the other hand, “Local saint” is someone who lives in his/her original community and is not well-known to other areas but is venerated among local people in the indigenous manners. Some of these local figures are an “Ancestral saint,” regarded as the legendary ancestor of each community, and the veneration function to unite the tribal community (Takaki, 2000). The above three types are human saints while the “Spiritual saint” is an impersonal or semi-personal character, who is fused or identified with a spirit.

This study refers to these categories with regard to the custom of visit (*ziyāra*) to the sanctuaries in South Tunisia which is a common form of pilgrimage. It is aimed to discuss them in terms of integration with natural objects, such as trees or mountains. It is far removed from hagiographical approaches to saint veneration that regards the saint as a historical figure and is instead on the level of “Islam of the people.”

This study is based on fieldwork and interviews conducted from 2014 to 2017 in South Tunisia, especially in villages B, M, Z, and T in the governorate of Gabes located at the north end of Jebel Demmer (Demmer mountain chains). B and M are Arabic-speaking villages and Z and T are Amazigh-speaking. The Arabic-speaking village B is located in the end of the flatland between the Demmer mountain chains, and the Amazigh-speaking village T is located in the depth of the mountains and village Z is located on the edge of the mountains. Except the village T, the three villages that originally locate in the top of each mountains, have new settlements in the foots for better infrastructure and educations. New villages of Z and B contain almost of the villagers and have left old ones vacant. They just return there for the annual festivals or *ziyāra*. The old village of M keeps people to stay due to its locational importance of the crossroads, military, and tourism even though it has new one with well occupied with local mountainous immigrants. Village T remains as it was without new settlement, but it suffers also the big population outflow. Although it is an Arabic-speaking, village M has been strongly affected by the Amazigh culture due to its location in the mountains of the Amazigh territory. All four villages are located in a hot semi-arid climate surrounded by rocky desert among the mountains, with an annual average temperature around 20 °C and about 200 mm of annual rainfall. The people support themselves through the cultivation of olives and some wheat and the pasturage of goats or sheep in the desert area. This survey concerns the oral and written information collected through basic interviews with pilgrims and inhabitants as well as participant observations on the pilgrimages and rituals of families in the four villages of the governorate of Gabes.

3. Saint veneration related to natural objects

3.1 Sidi Gnaoua in village Z

The *zāwiya*[12] called Sidi Gnaoua is found 2 km west in the new village of Z; the people of Z and other neighboring areas like to visit it. Most of them do not know the origin of the saint, but according to several informants, Sidi Gnaoua was a servant who came to this place accompanying his master, Sidi Ali Mganni. The saintly master became ill and, knowing that his time of death was approaching, he ordered his slave to bury him "where the mule will stop;"[13] before dying, the master promised the servant that, as a reward for his fidelity and obedience, "the name of the servant will be more venerated than that of the master" (Libaud, 1986, p. 142). Both of them are buried in the burial chamber of the *zāwiya*.

Gnaoua means either a slave or a member of an ethnic group originally from the south of the Sahara; it also refers to the form of the music and rituals associated with this ethnic group. It is worth noting that a group of three or four Gnaoua musicians is also called Sidi Gnaoua (Hunwick, 2003; Takaki, 1992). This makes it seem likely that the servant was of a sub-Saharan ethnic origin. Sidi Gnaoua is a big *zāwiya* with more than 10 cells for pilgrims. It was constructed by the Bey of Tunis in the early 20th century and renovated by a Frenchman who had a dream of Sidi Gnaoua. The capacity and the fame of the *zāwiya* permit pilgrims to develop brotherhood with many other visitors from different villages.

In front of the *zāwiya*, there is an olive grove belonging to Sidi Gnaoua. According to a pilgrim A (in his 70s, male) from village M, when he was young, boys and girls got together there and enjoyed music. This reminds us of the reports of orgies combined with agricultural rituals referred to as the "Night of Error" or "Night of Happiness" in several places in North Africa (Basset, 1920; Provotelle, 1911; Takaki, 2000; Laoust, 1920). It seems to be based on a symbolic relation between sexual practice and agricultural fertility, frequently seen in archaic religions (Eliade, 1949/1996). East of the grove, at the top of a hill, is the mausoleum of a saint called Sidi Louijen, who is said to have been a relative of Sidi Ali Mganni. Visitors often proceed from (1) the *zāwiya* of Sidi Gnaoua,

Figure 6. *Zāwiya* of Sidi Gnaoua

Figure 7. Olive grove of Sidi Gnaoua and Sidi Louijen

[12] *Zāwiya* generally means a religious institution related to a saint, e.g., mausoleum, school, or lodge for pilgrims. In the narrow sense, it refers to a religious center of sufī *tarīqa* for collective practices.

[13] This is the common feature of the burial process of saints; many saints in south Tunisia such as Shīkhadra'a or Sidi Bouhlel are said to have been buried in this style.

to (2) his olive grove, then to (3) Sidi Louijen, and finally return to Sidi Gnaoua to stay the night. Some of them additionally go to another *kobba* (a shrine with a dome or conical roof) of a saint named Onm Hadīfa, on a hilltop to the southeast, after visiting Sidi Louijen. In summer, many people gather in this sanctuary and hold *hadra* (collective ritualistic performances). These are normally led by Sufi *tarīqa* such as Aissaoua or Qadiriyya along with professional musicians, but sometimes pilgrims initiate them spontaneously.

On the day before the night of henna, part of the succession of wedding ceremonies[14] in the local tradition, the families of the bride or groom each visit their venerated saints. The sites visited at this time should be the same sites where the bride or groom asked for their marriage before. The purpose of these visits is to perform the promised offering (*wa'ada*) in return for the completion of their request. The family of B (30s male) is from village M, where his parents still live, working in pasturage, and olive farming. B and his brothers are now working outside the village, though his married sisters live in the new village M and the center of village M. During the study period, B was married to his paternal cousin who had been living in the new village M. A *ziyāra* to Sidi Gnaoua was performed by the family members of the groom, while the bride's side of the family visited another saint called Sidi Ahbed in village M who is related to their ancestor.

Twenty members of the family, including children, arrived at the sanctuary in the morning, whereupon the male members performed the ritual of sacrificing (*dhubīhah*) goats at the sacrificial place on the south side of the *zāwiya*. They recited the name of God as is done when animals are slaughtered outside the context of the pilgrimage. The female members visited the burial chamber and offered *bukhōr* (incense) and *bsisa* (a sweetened paste of gram flour and olive oil) to the saint and ate the *bsisa*. They then prepared food using the sacrificed meat while the groom and the rest of the family danced and made music, sometimes with other pilgrims. After eating the meat, they started the dancing and music again in front of the saint's coffin while smoking *bukhōr*. They put a bowl of henna on the coffin during this party. Any visitors were welcome to join this celebration. At the climax, the aunt of B put henna on his right little finger as a sign of blessing from the saint. At the end of the *ziyāra*, the bride and his brothers visited the olive tree in the grove in front of *zāwiya*. It was important that this tree should be the same tree where he asked for marriage before. B walked around the olive tree counterclockwise as he offered his thanksgiving.

Sidi Gnaoua is a complex sanctuary of several saints whose origins are unclear. Because it is a big *zāwiya* thanks to donations from the government and its followers, it enables people to come together not only from neighboring villages but also from Gabes or El Hamma. Because of its location, which is not inside any of the local villages, it is easier for the site to attract the loyalty of pilgrims beyond the villages. This function of enabling brotherhood is characteristic of the

[14] Traditionally they perform a series of ceremonies for wedding (Louis & Sironval, 1972). Recently, those are reduced except some ceremonies such as *goffa* (trousseau), *ziyāra*, *henna*, *jahfa* (parade).

mainstream type of Missionary saints. There are many examples of personalized saints who traveled across borders to teach the Quran to local people. Sidi Gnaoua does not seem to have been a missionary but nevertheless has a similar function as missionary saints, creating unity that can overcome local boundaries (Venema, 1990). There is no precise information about the olive grove and Sidi Louijen on the hilltop, but the fact that they are the location for meetings of unmarried girls and boys in the field shows the possibility of a ritualistic function of the olive trees or the grove with the symbolism of terrestrial and human fertility. At the sanctuary of Sidi Gnaoua, the sacredness of the place and saints are expressed through the symbolic action of climbing the hill as an experience of ascending to the sky, while the marital ritual of visiting the olive trees represents an experience of the earth or trees. These are frequently seen in many sanctuaries of religions all over the world (Eliade, 1957/1959).

3.2 Sidi Yakhref in village Z

Sidi Yakhref is a sanctuary inside a mountain near village Z and its neighboring Amazigh village J, and the most of its pilgrims are from these villages. The name of the saint is Sidi Yakhref Sherif el Mediouni, died 1306 A.D., of unknown origin. From his name, it seems that he was not a local person but rather may have been from Mediouna in Morocco. Based on the inscription on the tombplate, this saint was from a family of *sharīf* (descendant of the Prophet), and was the father of

Figure 8. *Zāwiya* of Sidi Yakhref

Figure 9. Olive tree called Ghdīr Insaīd

another saint named Sidi Mahres Mediouni, who is buried in Tunis. He had companionship with the local people through a local secretary named Ali Ben Mohammed Al Mahroze Azrawi. The saint's descendant tribe is called Wlad Bel Elghīt, and they maintain his *zāwiya* in the mountain where they used to live. They have excavated a deep cave and built troglodytic houses which are connected by tunnels inside the mountain spreading to its ridges.[15] Only the family could climb to the top without

[15] Cave dwelling is quite popular in this area because of the climate condition and the possibility of enemy attacks, according to the history of the area (Bruun, 1898).

taking the longer outside route.

The villagers visit this place to ask for help with communal and personal issues. It is especially important for the community that newly married girls make the *ziyāra* to report their recent marriage. In summer, a few months before her marriage, a bride should go to visit Sidi Yakhref for thanksgiving and to request the next marriage for accompanying only unmarried girls from among her family and friends, sometimes with married women to help the preparation for cooking. During the *ziyāra* of L (20s, female), who was planning to get married two months later, she was accompanied by eight other unmarried girls. They climbed the mountain carrying cooking utensils and materials from its foot through a saint's olive tree called Ghdīr Insaīd. On the way during this pilgrimage, the girls had to separate into pairs and talk about the boy in whom each girl was interested, uttering his name and his mother's name. When they arrived, they offered a candle, *bsisa* and *bukhōr* to the saint's coffin, and started cooking. There is a cabin near the small *zāwiya*, but no other buildings for cooking. The simple foods such as soup and vegetables were prepared in the open air by the girls who accompanied the bride. The others waited for the lunch while singing and playing music.

After eating, all of the girls except for L looked for a grass called *gddīm*. They bundled five leaves of it and made a knot while chanting "*Yā rabbī thēbet*" (Please God make me good marriage), a phrase from the Quran and their desired partner's name. Each knot should be tied firmly so that it will not loosen, which would indicate the incompleteness of the wish. Whenever a girl's request is accomplished, she must be the organizer of the next *ziyāra* and bring other girls to Sidi Yakhref to give them the opportunity to wish for marriage, and she must visit the saint with her close family three days prior to her marriage to offer animal sacrifice. Seven days after the marriage, the bride should visit the site again, this time alone with her new husband, and put their names on the stone.

There are two olive trees affiliated with this sanctuary on the south and north sides of the mountain. The south one is where the saint preferred to stay for *khalwa* (silent meditation), and the north has an individual legend. It tells that, long ago, when there had been a drought for several years, an old man from Wlad Bel Elghīt found the tree almost dried up, so he prayed to God for rain. Shortly after, dark clouds covered the sky and rain started to fall. The rain never stopped until the water came halfway up the mountain of Sidi Yakhref. The people of village Z, hearing of the abundance of water in this place, came to carry it away for their own use. When the level of water had decreased by half due to their heavy use, the remaining water turned red. Knowing this warning sign, the old man who had prayed for rain then declared that the rest of the water was for this tree, and stopped the people from taking any more. Thus this olive tree is called Ghdīr Insaīd (reservoir of Insaīd). Insaīd is a local male name but it is unknown whether this name refers to the tree or the man. People regard this legend as a sign of the supernatural power of the tree. For this reason, older villagers prefer to visit this tree rather than the mausoleum of Sidi Yakhref.

Girls climb the mountain speaking the names of boys and their mothers, clarifying the boys' maternal origins for the saint, in order to get an oracle regarding whether these boys would be good matches for the girls. The practice of asking oracles to tell the future (especially regarding the harvest) by visiting or sometimes sleeping at a tomb is found distinctively in the saint veneration of North Africa and is considered to have derived from the practices among the Amazigh tribes in the Roman era (Brett & Fentress, 1996/2007). Sidi Yakhref is said to appear in dreams to the pilgrims and devotees to give oracles. A late female descendant of Sidi Yakhref whose name was Dadaouish was said to be able to speak to the saint in dreams when she stayed in the cave of the mountain. He offered to give her anything she wanted, and did indeed give her a treasure, according to her legend.

Despite the distant origin of Sidi Yakhref, he left offspring in the community, and this family have served as *khadem* (or *wakīl*: caretakers) for the site. The villagers have venerated the saint so that he has become deeply embedded in the local customs. The visitors to his shrine are limited to those from the villages Z and J, where his descendants still live. He is considered a nearly local saint although he was also a kind of missionary. The placement of an oracle on a mountain or inside a cave on a mountain is similar to practices in spiritual veneration that are frequently seen in caves among mountains in Morocco (Crapanzano, 1973; Westermarck, 1926a, 1926b; Doutte, 1909/1984). It is also possible that the practice of climbing to petition for a wedding is symbolically related to an advent harvest ritual. The celebrated power (*baraka*) manifests in the form of the saint, as well in nature as grass, trees, and the mountain and caves. The set of legends associated with this sanctuary is made up of the symbols of natural objects although Sidi Yakhref does not have a specific relation with spirits. The veneration of this saint absorbs plenty of the elements of nature worship though his basic character is that of a saint embodying the teaching of the Quran as well as an ancestor of the villagers.

3.3 Shīkhadra'a between villages B and M

The sanctuary of Shīkhadra'a is located in a valley 5km away from village B facing the mountains of village M. The *zāwiya* is on the top of a mountain and the lodge on its foot. According to his *khadem*, the original name of the saint was Mohammed Lakhdar, though most of the pilgrims do not know this. Instead, he is called by his local name, Shīkhadra'a derived from his social position (*shaykh*) and the geographical location of a mountain top, which is called an "arm" (*dra'a*). He died about 400–500 years ago in Sakia el Hamra in West Sahara, a place that is famous for many sanctuaries of Sufi saints. The role of his *khadem* has been taken by a family descended from Sidi Ali Boumedien, a local saint with a sanctuary near Shīkhadra'a. This is because the saint Shīkhadra'a had no descendants in this place. According to an older source who belongs to the family of the *khadem*, the saint was the descendant of Fāṭima al-Zuhrā', a daughter of the Prophet, and originally came from Algeria as a missionary to this area and taught them about the Quran.

Figure 10. *Zāwiya* of Shīkhadra'a

It is popular among the people of the area to visit the *zāwiya* of Shīkhadra'a to pray for his *baraka* and to ask for a specific request, such as a good match for marriage, a good job, or sometimes healing of an illness. Shīkhadra'a is said to have been a talented healer; he usually cured patients by putting his hand, rubbed with warm olive oil, on the affected part of the body and casting a spell. The name of the saint, Shīkhadra'a, refers not only to himself but also to the mountain where his mausoleum is located. He preferred to stay under the olive tree that is now venerated by pilgrims.

A pilgrim named R (80s, m) used to go on *ziyāra* to Shīkhadra'a twice a year in the past, usually during the summer or winter holidays, or at the holidays of *Eid*. This *ziyāra* with four people was planned to ask for success and prosperity in the marriage of R's daughter (40s). They arrived at the foot of the mountain in the morning, where a small house was open for visitors as a free lodging facility. Originally, this was the house of the family of the *khadem*, Sidi Muhammad, Sidi Salem, Amar, and Eljeb. They served as the saint's *khadem* for many generations and some of them are regarded as saints also. This family of *khadem* produced several saints. Sidi Muhammad, the latest of them, was a great-great-grandfather of Eljeb, previous *khadem* and late husband of the present *khadem*. According to the family, the mother of Sidi Muhammad dreamed of Shīkhadra'a before his birth, with an oracle that this lineage would end after three generations and that her son will be the last saint of this lineage. This Muhammad renewed the mausoleum of the *zāwiya* at the top, and he himself was also buried next to Shīkhadra'a. The sons of Muhammad and Eljeb, his grandson, were buried in the mausoleum of the family. Eljeb had no sons, so the lineage ended with him as the oracle had predicted. Although the present *khadem* stated that there have been no saints after Muhammad, pilgrims regard the members of this family to have spiritual power inherited from Shīkhadra'a, and naturally treat them as saints by visiting their mausoleum as well as that of Shīkhadra'a. In spontaneous saint veneration, arising in the absence of a system of canonization, the border between "saint" and "not saint" is very ambiguous. The interpretation depends finally on each person's experience and sense although there is typically a general consensus in the community.

The present *khadem*, H (female, 60s) lives at this place with her daughter and takes care of the

mausoleum of Shīkhadra'a and those of other saints, the mountain path to the top, and their house. This sanctuary is small and does not have the patronage of *tarīqa*, but they have visitors constantly and it has been the focus of the local people's worship.

For the sacrifice of animals, visitors should select a place that is in alignment with the *zāwiya* of Shīkhadra'a at the top of the mountain and his olive tree, which is called *Shajara Shīkhadra'a* (Tree of Shīkhadra'a) near the house. The saint used to practice *khalwa* and sleep under the olive tree during his lifetime. It was owned by him and later by his *khadem*s. Using this place for sacrifice is obligatory, as it shows the importance of the olive tree. The animal should face the direction of Mecca when it is sacrificed, as is customary according to Islam. Additionally, its face should be turned in a downward slope toward the outside of the sanctuary because it is taboo to step over the blood from the body of a sacrificed animal. If someone breaks this rule, it is believed that this person will be cursed or possessed by *jinn*. One visiting family took a sheep to the top and sacrificed it in front of the mausoleum of Shīkhadra'a, which is the more traditional style.[16]

Cutting and dividing the meat is done by a male family member. Some parts other than the meat, heart and liver are given to the *khadem* to use or to sell for funds to repair the sanctuary. As *khadem*s are determined to remain volunteers who do not receive money from visitors directly, these are their main sources of income. The women of the family cook the heart and the liver (*kebda*) as offerings by tearing them apart and throwing small parts to a venerated object or place; this action is called *tatīsh* in the area and frequently seen in *ziyāra*. Then, they share the rest as food among the other pilgrims and the *khadem*. Before the sun sets, they start to climb up the mountain. The older pilgrims stay at the place; it is not a problem if not all family members complete the pilgrimage, as long as the mother of the petitioner, who once climbed there for the same purpose herself, is with her.

Soon, the pilgrims arrive at the place called the tree of Shīkhadra'a (*Shajarat Shīkhadra'a*), a big olive tree located in the date grove at the foot of the mountain. There they perform *tatīsh* with

Figure 11. Olive tree of Shīkhadra'a

Figure 12. *Zāwiya* of Shīkhadra'a on the top

[16] The family of R had also followed this style until recently. Due to his aging, he could not continue. He asked the *khadem* whether it would be permitted to change the process, then she asked God by meditation, and finally he got the permission.

bsisa. Small pieces are thrown around the olive tree to please the tree. Through the date grove, where embankments keep water for the trees, the pilgrimage path goes up the mountain. It is a rocky and steep footpath that takes 40 minutes to reach the top. At the top of the mountain is a white mausoleum with a *kobba*, similar to other places in Tunisia. Afterward, some pilgrims visit the holy spring called *el ayn* behind the mountain and come back to the lodge. The history of this spring is unknown but it is probably because the spring water in such a desert mountain is rare.

According to legend, it was the saint's will that the place of his mausoleum should be determined by where the donkey carrying his coffin stopped as with Sidi Ali Mganni. Because the saint died abroad, his fellows conformed to his wished, sending his coffin off with a donkey. The donkey arrived at the foot of the mountain and climbed up it without resting, finally stopping at the very top of the mountain. It was surprising that the place was covered with stone and was very suitable for constructing a tomb. People thought that this was an expression of the *baraka* of the saint.

There are two coffins inside the mausoleum; the large one at the back is that of Shīkhadra'a, and the other one is that of his *khadem*, Sidi Muhammad, who renewed this mausoleum in his days. The pilgrims prayed there, naming their specific wish, and performed *tatīsh* with *bsisa* and offered *bukhōr* to Shīkhadra'a. Each of them is supposed to eat *bsisa* at the place of the mausoleum. Each person who eats it congratulates the pilgrim on the completion of this visit, saying "*Inshallah Ziyāra Makboura!*" (Please accept this *ziyāra*!). As most *ziyāra* are conducted for a specific purpose, this chanting is a prayer for the acceptance of this *ziyāra* and the fulfillment of the pilgrim's wish. The importance of communal dining is also significant in such occasions. The sense of duty for both giver and receiver is clearly distinct from the normal custom of sharing food. Any food taken along during the visit is basically offered to the saint or the tree and should be shared with all people who attend the occasion. Pilgrims invite male members of other families to share their meal. Meanwhile, they also provide plates for their female family members and the *khadem*.

Evidently, Shīkhadra'a was a type of Missionary saint, and he does not have any descendants in this place. However, the family of his *khadem* is treated equally as his descendants and they have bequeathed his sanctuary and his *baraka*. In the same time, this sanctuary is well localized through combination with plenty of natural objects like mountain, tree, and water. The sanctuary's olive tree is not just an additional place along the route to the top but also a symbol of a certain power of the saint. The story of the olive tree as told by another pilgrim (L, male, 60s) shows that it is not just a stop on a pilgrimage path. One family who visits this place repeatedly once skipped the olive tree of Shīkhadra'a and went straight to the top of the mountain. The donkey that carried their burdens suddenly slipped in the middle of a steep, craggy path, and tumbled down to the foot of the mountain. It finally stopped in front of the olive tree, without injury. People thought it was a warning for their inattention to the olive tree. Subsequently, they now never skip their visit to the tree before going up

to the top. This is what every family I interviewed in the lodge claimed: it is obligatory to visit the olive tree first. This story shows the autonomous importance of the olive tree. Furthermore, considering the emphasis on the priority of visiting the olive tree before the mausoleum, visiting the olive tree seems to be a primal element in their *ziyāra*. It could be a phenomenon preceding the worship of the saint because in this region many sacred trees are found apart from historical sacred figures, as shown in the next example.

3.4 Shamseddīn and Sidi Ali Boumedien between villages B and M

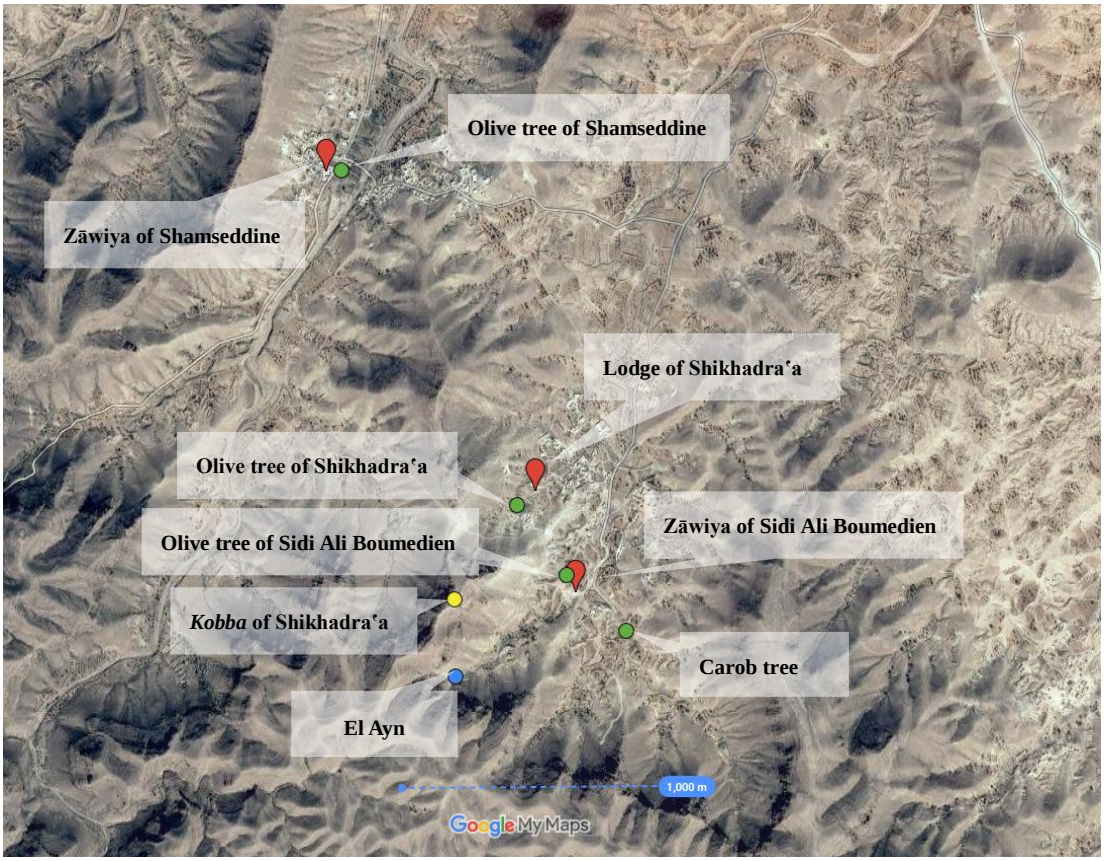

Figure 13. Map of the sanctuaries and the venerated objects near Shīkhadra'a

They have a *zāwiya* of Shamseddīn near Shīkhadra'a on the north side of the mountain, and also a *zāwiya* of Sidi Ali Boumedien on the south, each located in a valley. Although neither can be seen from the other, they are closely connected by the mountain paths; this can be seen from the top of the mountain of Shīkhadra'a. Indeed, pilgrims often visit these three sanctuaries consecutively, and this isolated place has been favored by saints and pilgrims. The deepest valleys away from village B, facing the mountains of Demmer, are close to village M via the mountain paths, so that many people

from village M visit these sanctuaries. Among the three, Shamseddīn is the oldest saint. Shamseddīn Zemzmi is said to have been a descendant of the Prophet, born in the Arabian Peninsula, who visited this place as a missionary in *Hijrī* 470 (A.D.1077-1078). He established a Quranic school (madrasa) and married a local woman named Mzēta, which became the local name of this area. According to the *khadem* of this saint, many saints of the southern region learned at his Quranic school which was located in the same place as his *zāwiya*. There are more than 10 cells for pilgrims in his large and respectable *zāwiya* of the Ottoman era. The coffins of the saint and his wife are set in the burial chamber in the center of it with his *shajara* (family description) that is kept in the ministry of Religious Affairs in Tunis showing his authenticity. This saint attracts people from as far away as Gabes or Djerba Island as well as the neighboring villages. The place is often packed with pilgrims, especially in the season of *Eid al-Adha* and *Eid al-Fitr*.

It is clear that this sanctuary has served as a religious center for South Tunisia with its large *zāwiya* and its madrasa. Shamseddīn has his related olive tree just near to the *zāwiya*, and its olive fruits are supposed to be given to the poor. Remarkably, however, the olive tree seems not to be visited by many pilgrims because, as it is a *mazār* (shrine) of a saint who died nearly 1000 years ago, the tree is supposed to perish, according to the *khadem*. This explanation shows that visiting olive trees as shrines of saints, as also seen at the *zāwiya* of Sidi Ali Boumedien, is more of a local phenomenon, and reveals the discomfort that arises from my "equation" of folk customs and "authentic" Islamic saints. In this sanctuary, where something closer to "authentic" Islam is practiced, folk customs such as visiting sacred trees are not encouraged. In such places, natural objects are said to be given their blessed powers due to their subordination to the saint. Thus, the explanation of the sacredness of natural objects by Dermenghem suits this type of "authentic" Islamic saint.

The local saint Sidi Ali Boumedien (A.D. 1224-1290), whose *zāwiya* is located in the valley to the south of Shīkhadra'a, is said to have been a descendant of a brother of Shamseddīn. He studied the Quran at the madrasa of Shamseddīn and became his *khadem* there. According to a local legend, when Sidi Ali Boumedien touched a dried olive sapling, it turned fresh and green in the blink of an

Figure 14. *Zāwiya* of Sidi Ali Boumedien and the mountain of Shīkhadra'a

Figure 15. Sacred carob tree and the votive clothes

eye. Upon learning about this miracle, Shamseddīn told him he should not be a *khadem* but rather that he himself was a saint. So, Sidi Ali Boumedien left his master and took up his place in the nearby valley. There is a gap of at least 100 years between the ages of Shamseddīn and Sidi Ali Boumedien, and it is unlikely that they actually lived together as contemporaries, but it is possible that they had a communication in a dream as a *khadem* and his late master saint. Generally speaking, it is not a problem for venerators whether saints had communication in their lives or after their deaths.

The olive tree touched by Sidi Ali Boumedien still exists at the back of his *zāwiya*, which people visit to ask the saint or the tree for favors. One pilgrim (70s, male) said that, before this *zāwiya* was constructed, pilgrims had visited the tree. At one point he saw so many votive clothes hanging on the tree that it had no space for more. Now, fringes or strings of wool are tied to the olive tree instead of clothes. In addition, there is a sacred carob tree in the opposite valley in between the *zāwiya*, with a *kobba* 1.5 meters high in front of it. This tree is regarded as a female saint, and many clothes are tied to its branches as seen in the old days of the olive tree of Sidi Ali Boumedien. Visitors offer candles and *bsisa* to it and tie their clothes to it while wishing for their personal requests such as marriages or jobs.

Pilgrims to Sidi Ali Boumedien firstly visit his coffin to recite a phrase from the Quran and to state their request, then those who have special requests, mostly women, visit the olive or carob tree. It is normal for them to visit the *kobba* of Shīkhadra'a on the top of the mountain after the *zāwiya* of Sidi Ali Boumedien. The sanctuary of Sidi Ali Boumedien is a complex of multiple saints and multiple sacred spots. This saint has plenty of descendants in this village, and each of the 18 clans provides one of the *khadem* who trade off working week by week for the *zāwiya*. They have a large-scale *zerda* (festival for a saint) every July which gathers many pilgrims and includes a *hadra*. Sidi Ali Boumedien is a local saint because he did not commit to international mission work beyond the national boundaries as Shamseddīn did. This may be why the archaic belief in tree veneration has not been eliminated from his sanctuary; on the contrary, his sainthood is strongly connected with tree veneration as revealed through the renewal of the olive tree. The veneration of Sidi Ali Boumedien and Shīkhadra'a represents a syncretism of Islamic saint veneration and nature worship.

These complex sanctuaries of multiple saints and natural objects can be understood as a result of syncretism of sainthood and the local tradition, as well as of the Islamic purpose to spread Quranic teaching and the acceptance of the folk religiosity regarding nature existing since before the Islamic invasion.

3.5 Camoul Brel in village T

Compared to the other three villages, village T is notably deep in the mountains and has thus been able to preserve its indigenous Amazigh culture relatively free from the religious control of

Islam. In this village, the veneration of olive trees, which has been disappearing under Islamization in other regions, is still practiced in the form of saint veneration. The local people identify the sacred old olive trees as saints or spirits. Among them, Camoul Brel is said to be the most powerful olive saint; it is located in a valley in a rocky desert 6 km from the village center. Camoul Brel is the name not only of the olive tree but also of a female saint and a female spirit, both of whom are associated with the site. Camoul means a house and Brel is a male name, so it is probable that Brel was the name of a *khadem* who used to live in this sanctuary. The name of the place seems to have turned into the name of the saint. The villagers have many stories about people having seen the female spirit dressed in a white cloth in this place, and they hold this place in awe as well as venerating it. It is taboo to visit this place for any purpose other than *ziyāra* because it is a "hot" (haunted)[17] place. People who break this taboo will incur such punishments as going mad or experiencing disastrous misfortunes.

Figure 16. Offering *bukhōr* to Camoul Brel

Figure 17. Camoul Brel and its *kobba*

As Camoul Brel is considered to have strong power to bring down danger, people avoid entering the sanctuary and even passing near this place on the road if they are not performing a *ziyāra*. For pilgrimages to Camoul Brel, the sacrifice of a goat or sheep is an obligation, whereas in other places this is not always the case. The animal sacrifice is performed by a male pilgrim. The animal is held facing Mecca and set between the tree and the shrine so that it may be offered to both sites. Its *kebda* is cooked separately with salt, and offered to the tree from all sides in a clockwise direction and to the shrine by *tatīsh*, then shared with other pilgrims. Along with the remaining meat, pilgrims then prepare couscous and/or other foods to eat there. The leftover couscous is brought back to the house and shared with other relatives, as it is regarded as being full of *baraka*. Anyone can do the cooking, but the *tatīsh* of the *bsisa* and *kebda* and the offering of the *bukhōr* should be done by a woman, typically by the mistress of the family or a female petitioner who comes to ask the saint for a special wish.

[17] A place possessed by spirits is called *bouk ashouna*, namely, hot place.

At Camoul Brel, women tie their *hizēm* (traditional woolen belt for women) or scarf to a branch of the olive tree to make their wish. This knot (*okda*) should not be untied until the wish is fulfilled. The branch on which it is tied should have no other knots. The colors of these votive clothes are chosen according to the nature of the request. If the wish is for a wedding, the cloth should be red, which is the color of a bride's veil, and if it is for a baby, the cloth should be a white *hizēm*, which is worn by married women and used as a belly band, or a similar white cloth. The pilgrim C (female, 30s) and her mother S (female, 60s) mentioned that only women can perform this ritual of tying cloth to olive trees and that olive saints only do favors for women. If the petitioner is a man, his mother or wife will make the request to the tree. Just as there is a special spiritual relation between an olive saints and its *khadem*, women are likewise believed to have strong connections with such olive trees.

At the same time, the understanding is prevailing that the olive tree itself is female as depicted in various folktales concerning Camoul Brel and other trees. The following is a story about Camoul Brel that is typically told during a *ziyāra* to it: After making a *ziyāra*, a man picked olive fruits from Camoul Brel and stuffed his pockets. When he was about to leave the place, something was thrown toward him from behind. With trepidation he turned and saw a beautiful woman. Surprised, he slipped and all of the fruits fell out of his pockets. He shut himself in his house and did not talk to anybody for six months (B, female, 90s).

The stories of olive saints in village T typically describe the appearance of a woman near the tree and a punishment for a violation of the prohibition, which usually consists of an attempt to privatize the sacred (Kitagawa 2017). In these stories, the sacred olive trees or the spirits possessing them have personalities and miraculous powers to seduce men, give punishments and blessings, and request sacrifice as same as human saints do. In the village, spirits are called *jinn* (male), *jinniya* (female) or *malak* (angel), and the veneration of spirits have been influenced by the archaic belief since before the rise of Islam in the Arabian Peninsula. They are described in the Quran as being among the beings created by God. The concept of *jinn* is originally from Arabia but has been integrated into the beliefs of each local small deity or spirit, which are now called *jinn* wherever Islam has prevailed (Akahori, 2008). Among these four villages as well as in other regions of North Africa, people consider a wide range of their life experiences to be influenced by *jinn*, and accordingly they venerate, soothe and fear them and are sometimes possessed by them (Crapanzano, 1980). Especially in village T, spirits are identified with trees or caves as well as saints or ancestors, which implies the residue of old local beliefs regarding nature and deities.

Trees and other natural objects are the sites of "the manifestation of the sacred" (Eliade, 1957/1959) whatever is recognized as saints, spirits, ancestors, or any supernatural power, and they function as symbols. The manifestation is based on the symbolic relation between the image of the blessing olive tree and of saints or spirits as supernatural beings and also that of the mother. The

symbol of a tree as a gateway between this world and the other world, as expressed elsewhere in the World Tree (Yggdrasil) and the Axis Mundi, can be seen in many religions. The beliefs concerning sacred trees in village T explicitly use such symbolism of the tree, particularly with regard to the trees representing saints in the Islamic framework. In the belief in olive saints such as Camoul Brel in village T, archaic elements of symbolism of nature seem to have survived in "disguise" as saint veneration or even been legitimized by the Islamic authority.

3.6 Sidi Yakoub and Sidi Thāmal in village B

The village of B is located at the edge of the plain between Jebel Demmer and the gulf of Gabes. The village was previously located at the top of the hill facing the flatland on the East; after independence, the villagers started to make a new village at the foot of the hill around the mausoleum of Sidi Yakoub and Sidi Thāmal. Today, in fact, these two saints are in the center of the village. Sidi Yakoub, whose proper name is Elghouth Ahmed Abou Yakoub Belabbes (-A.D. 1532), was from Sakia el Hamra, West Sahara according to the official record of the village. He aspired to go to Tunisia in the age of Bey and contacted the *shaykh*of the village who was named Ali Ben Thāmal. Sidi Yakoub built a madrasa near the mausoleum of Sidi Thāmal which had been built in 850 Hijrī (A.D. 1446/1447). Sidi Yakoub was also buried next to Sidi Thāmal. Near their mausoleum there is an olive tree for each saint, and every Friday as well as on the occasion of the *zerda* in October, pilgrims first go to the olive tree of Sidi Yakoub where they sacrifice animals, offer candles, *bukhōr* and *bsisa* to the coffins of the saints, then go to a small shrine called *diwan* about 100 meters away to offer a *hizēm* (belly belt). This place used to have an old date palm tree where Sidi Yakoub preferred to stay according to the legend. In the old village of B, there is a *kobba* of Sidi Thāmal near the old jujube tree (*sidra*) where the saint preferred to meditate. When people ask this saint to fulfill their wishes, they visit his coffin and his olive trees in front of the mausoleum; when the request is fulfilled, they go up to his *kobba* on the mountain to offer the promised visit. Given the relation between these saints and the jujube or the date trees, it is obvious that the saints' action is the origin of these instances of tree veneration. In the case of the olive trees and their

Figure 18. Olive tree of Sidi Yakoub

Figure 19. *Kobba* and the jujube tree of Sidi Thāmal

affiliated saints, however, no such explanation is given, and people visit the olive tree because of the inherent worth or power of the olive tree itself. It is clear from the order of their *ziyāra* in the sanctuary. The implication is that the custom of visiting olive trees seems to be conducted more autonomously than other trees.

Although the two saints in village B have been venerated in association with the rich symbolism of natural objects, their *zāwiya* and its madrasa were destroyed in 2012 by local Salafists in the upwelling of Islam fundamentalism associated with the Arab Spring. Although the demand from the villagers for its reconstruction was huge, the local government rejected this plan several times to avoid provoking the Salafists into making another attack on the saints. Eventually, however, their request was accepted and as of the summer of 2017 the sanctuary is under construction. The destruction of the *zāwiya* and its madrasa was undertaken by adherents of the fundamental side of Islam who believe that saint veneration does not fit in with strict Islamic teaching. It must be a very strict religious pressure that could see the *zāwiya* of a saint who contributed to the spread of Islam as a target for attack, not to mention nature veneration. A steady stream of criticism against saint veneration and folk religiosity has been delivered by the fundamental theologists and jurists such as Ibn Taymīya (1263-1328) and his intellectual heirs, the Wahhabists, who have destroyed *zāwiya* since the 19th century.

In the other three villages, there were attacks by Salafists on small *kobba*, but these were not the total destruction of any other venerated *zāwiya*, and any conflict that prevented the government from starting reconstruction for years was not heard except in village B. This is probably because the other villages are located deeper in the mountains and are more strictly controlled by the villagers, who take their autonomy seriously and who were critical of the fundamentalism that was popular among urban dwellers and younger Muslims at that time. Religious tolerance has been preserved because these villages are in the geographical, political, and religious periphery.

4. Difference of the types of saints among Arab and Amazigh influences

In addition to the above cases of saint veneration, I have observed several other pilgrimages to saints related to natural objects in four villages, and classified them into four categories according to the practices of the pilgrimage, hagiographies, and legends.

	village Z	**village M**	**Village Z**	**Village T**
Geographical condition	Plain / Foot of the mountain	In the mountain	Plain / Foot of the mountain	In the mountain (deeper than M)
Language	Arab	Arab	Amazigh	Amazigh

Table 2. Comparison of the geographical and linguistic conditions among four villages

The villages vary in the extent to which they are exposed to Arabization; village B, which is located in the flatland, is an Arabic-speaking village and has been exposed to the fundamentalist movement as seen in the destruction of the *zāwiya* of Sidi Yakoub and Sidi Thāmal. Villages M and Z are the next most exposed. There are various views about the origin of the people of village M (Menouillard, 1912; Ben-Hamza, 1977): although they do not speak Amazigh, the village's location has allowed them to be influenced by the surrounding Amazigh culture, even though they are said to be Arab in origin. While village Z remains an Amazigh-speaking community, straddling the border between the plain of Gabes and the mountains of Amazigh, it is exposed to Arabization to some extent, which may explain why the people left their deep old community in the mountains a few decades ago. On the other hand, village T is still located deep in the mountain chain, without direct access to Gabes except through village M or Z, and accordingly has kept its Amazigh language and culture conservatively. Village T does not have a venerated saint who came to this village as a missionary, and the villagers seem to prefer visiting local saints combined with spirits and ancestors to venerating "authorized" Islamic saints.

The above survey results suggest that a high level of Arabization correlates with the veneration

Name of saint	**Location**	**Type**	**Natural object**
Sidi Yakoub	village B	Missionary	tree, spring
Sidi Thāmal	village B	Local	tree, mountain
Shikadraʿa	village B/M	Missionary, Localized	tree, mountain, spring
Sidi Ali Boumedien	village B/M	Local, Ancestral	tree, mountain
Shamseddīn	village B/M	Missionary	tree
Sidi Mbarak	village M	Local/ Ancestral	tree, mountain
Lalla Belboula	village M	Local	tree, cave, mountain
Sidi Ahbed	village M	Ancestral / (Spiritual)	tree
Sidi Gnaoua	village Z	Local / (Missionary)	tree
Sidi Louijen	village Z	Local	mountain
Sidi Yakhref	village Z	Missionary / Ancestral	tree, mountain
Sidi Abdelkader	village Z	Missionary	tree, mountain
Camoul Brel	village T	Spiritual	tree, cave
Onm Azīza	village T	Spiritual / Ancestral	tree, cave
Onm Rabbēs	village T	Spiritual	tree, cave
Onm Zīn	village T	Spiritual / Ancestral	tree, cave

Table 3. Classification of saints related to natural objects in four villages

of more authorized saints such as missionaries. The more a village has been Arabized, the easier it was to find established saints. It is also possible that, in villages such as B or Z that lie on the border between Arab and Amazigh land, such "authentic" saints who had learnt Islam properly or who were relatives of the Prophet were intentionally established there to be a foothold of Islamization. On the other hand, though I could find local saints in all villages, saints who were affiliated with particular local tribes and respected as ancestors were seen only in villages where Arab influence is low. Furthermore, a saint identified with a spirit, not just related to it, was only seen in village T, the remotest village. This shows the correlation between Amazigh culture and the symbolism of nature. It is assumed that whatever elements of indigenous beliefs on nature, veneration of small local deities or tribal ancestors have survived suppression by Islam under Arabization, and it have been transformed into something acceptable within Islam, namely, belief in saints, or jinn used by saints.

At the sanctuaries of established saints, the veneration of natural objects is explained as originating from saints' actions and preferences during their lifetimes, as Dermenghem has indicated. Such explanations are valid for villagers in places where human saints have a major presence. On the other hand, in places where archaic Amazigh traditions are well preserved, more importance is attached to the natural objects and the ancestral or spiritual saints than to the historical figures. These are understood to be far older than any human saints and to possess unusual powers, which is why they should be revered and venerated. In such places, natural objects have their own reality rather than merely serving as backdrops in the stories of the saints.

5. Conclusion

This chapter considered how saint veneration in South Tunisia includes aspects of nature veneration and how believers can have different views of different types of saints with four villages located inside Demmer mountain chains and the plain under the mountain. To examine the saint veneration in the four villages, two of whom are Arab and the others are Amazigh speaking villages, sixteen saint sanctuaries that are combined with natural objects such as trees or caves are described with their hagiographies, legends, and local customs. To clarify them, I brought four categories of saint as "Missionary saint," "Local saint," "Ancestral saint," and "Spiritual saint" according to the nature of each saint described by caretakers, pilgrims, and villagers, and the categories showed the influence of Islam on each saint veneration in different levels. Among sixteen saints, the types of "Missionary saint" and "Local saint" are found more in Arab villages than in Amazigh villages, and the types of "Ancestral saint" and "Spiritual satin" are found more in Amazigh villages than in Arab villages. It is suggested that the more a village has been Arabized, the more they have authorized saints. On the contrary, the less a village is influenced by Arab-Islamic dominance, the more I could find the folk, and thus indigenous level of saint veneration in South Tunisia to combine saints and nature freely and organically.

Through this chapter, it is confirmed that the absorption of nature veneration in saint veneration is uniquely originated in the religious tension between open sensitivity to reality and keen sensitivity of longing for One God. These complex beliefs regarding nature and saints are still experienced by the people symbolically and directly to various extents. In the next chapter, I discuss the syncretism of saint veneration with the veneration of olive trees, ancestors, and spirits practiced in village T where the influence of Arab-Islamic is smaller than the other villages with the details of ritual practices, attributes, symbols, and social and religious significances.

Chapter 3: Pilgrimage to Olive Trees in Village T

1. Introduction

In the previous chapters, reviewing on the motif of olive and its symbolic meaning in the religious traditions in the Mediterranean region, I tried to examine the general characteristics of symbolism of olive, and clarify the specificity in North Africa region with the comparison of the olive customs in Morocco and Tunisia. Also, in order to capture the current olive beliefs from the context of saint veneration that is prevailing in North Africa, the classification of saints concerning the relationships between saint veneration and veneration of nature, was performed based on the saint veneration revered in the four villages of Arab and Amazigh in the inland area of the governorate of Gabes, South Tunisia. Among them, this chapter focuses on the case of village T which characteristically showed the syncretism of the belief of olive and saint veneration.

The two opposite standpoints of Westermarck and Dermenghem on the relationship between saints and nature including trees are employed to explain the influence of Islam in the Amazigh village and the survival of indigenous culture. Based on the ritual actions and the narratives of pilgrims as well as the other olive symbols found in the village, I try to clarify the structure of belief in olive tree of village T with its social and religious significances. Thereby, I would like to discuss, by the theory of religious experiences, how the olive-saint complex emerges as the sacred from the symbolic system of olive. It enables to shed light on the essential aspect of olive-saint veneration as the idea of "*Das Ganz Andere*" (wholly other) of Otto (1936/1923, pp. 25-30), a perspective that has not previously been discussed with regard to saint veneration in Islam. This study reveals the religious function of the belief of the old olive trees in South Tunisia, and the social role enable the people to identify themselves as a descendant of the tribe that has original experience with the olives, and designate themselves to the community which was oriented by the cultivation of olive, and the total experience of pre-Islamic and Islamic values.

2. Issues of saint veneration and natural objects

Next, I will refer to the several issues on the studies of Islamic saints and the significance of this study related to these problems. Saint veneration in North African regions has uniquely developed among the Islamic world, behind which various cultures coexist. From the center of cities to the midst of desserts, the numerous mausoleums or shrines (*zāwiya*) for saints have been constructed and venerated. Due to the rise of the Ennahda Party following the Jasmine Revolution that occurred from 2010 to 2011, many mausoleums and shrines were destroyed by salafists in Tunisia (Benoit-Lavelle, 2013; etc.).[18] Many famous and local saintly festivals that attracted

[18] Please refer below sites (Access at September, 2018)

hundreds of devotees had been cancelled so as to not catch notice of salafists and be attacked by them. Most of the famous saint shrines in the capital or other cities are related to the sūfī orders like Shadhiliyya (McGregor, 1997) and are a big focus of people's veneration. That may be a major reason why they became the first targets of attack by their opponents when the fundamentalism gathered its strength in the society. On the other hand, in local villages, there were so many small local mausoleums and shrines for saints that were quite different from those of established sūfī saints. Especially, the beliefs of trees as saints' shrines or as saints themselves have strong connections with agriculture, and the influence of the indigenous Amazigh culture seemed very pronounced. They can be considered to remain unaltered, with less influence by political and religious situation of the central organization of the country.

Previous studies on saint veneration in Islam can be briefly categorized into three groups according to the approach they take: the study of Islamic thought, the history of Islam, and the anthropology of Islam (Akahori, 2005). The first of these examines the philosophies of the various saints as intellectuals according to Islamic theology. The second examines historical descriptions of saint veneration or the ways in which it has intersected with Islamic law. The third examines the process and characteristics of saint veneration in recent times. Akahori criticized the existing view on saints that takes Sufi as a standard of saint veneration and to regard other saints as a popular form of Sufism or just concomitant phenomena. He proposed the necessity of understanding those non sūfī saints as different phenomena from Sufism, and then discussed the intimate relationship between those two (Akahori, 2005, p. 8).

Sūfī saints are normally very well-known figures by the people of the area. However, local saints mentioned in this study are sometimes semi-humans or just natural objects as well as legendary persons or ancestors. Because Islam does not have a system of canonization, saints appear more freely than in Catholicism. One of the problems on the study of saint veneration in Islam and other religious traditions is the confusion of subjective sainthood that means acquired qualities such as knowledge or spiritual levels, and objective sainthood, which means the religious feelings towards saints from their devotees. They should be treated separately because they are very different positions. The subjective sainthood is the result of the saints' own approaches and efforts to make a special relationship with God through theological speculation or practices. Meanwhile, the objective sainthood is the experienced qualities of saints by devotees who want saints to mediate to Gods or the direct connection with saints themselves. It is experienced more symbolically and mythologically. Although they are based on different systems, it is hard to distinguish which element is influential

https://www.npr.org/sections/thetwo-way/2013/02/10/171508858/islamists-make-sufi-shrines-a-target-in-north-africa
https://www.csmonitor.com/World/Middle-East/2018/0307/How-Tunisia-s-resilient-Sufis-have-withstood-hard-line-Islamist-attack
https://www.news24.com/Africa/News/More-Sufi-shrines-torched-in-Tunisia-20130124

regarding the veneration of a saint if he has been venerated after his death a long ago. The case of the natural objects which are venerated as saints do not contain subjective sainthood, so it is suitable to examine people's understanding and experience of the saint.

Dermenghem discussed sainthood that is given to both human saints and natural objects, with references to trees, rocks, caves, sources and hot springs. According to him, sainthood of natural objects was subordinate to the sainthood of human saints. Sacredness of a venerated tree was not because of something belonging to the tree itself, but it remained as derivative of preceding action of a saint. For example, a very old mastic tree that was venerated by local people was sacralized because the tomb of Sidi Moussa sat on its root (Dermenghem, 1954/2011, pp. 136-138). His claim conflicts with a position like Westermarck, who stated that the "tree worship" before Arab invasion was taken into Islamic saint veneration. Westermarck pointed that there are tree worship "under the most transparent disguise of human sainthood among the Berber-speaking population of Morocco" in which "the place derives its holiness from the tree growing there" (Westermarck, 1926a, p. 75).

While the practice of ascribing sacredness to natural objects is often explained in a simplified and chronological manner, the experience of the sacred at such a site is more complex and synchronistic. It is also necessary to mention that the understanding of a particular object as sacred is sometimes inherited from previous religious traditions. Robertson Smith showed the dynamism of transformation from one religion to another, stating that, when a new religion takes a form that is decidedly anthropomorphic or astral, myths are devised to reconcile the new point of view with the old usages, but the substance of the ritual remains unchanged (Smith, 1889, p. 168). People frequently use new frameworks to authorize the pre-existing sacredness of things. It could lead the situation as Westermarck has described, "when the saint is an entirely obscure personage, as he often is in such cases, we have good reason to suppose that his shrine owes its existence to the grove rather than the grove to the shrine; and the same is the case when the latter is situated underneath a large or curiously shaped tree" (Westermarck, 1926a, pp. 74-75). As confirmed in the present study, therefore, the more obscure the saint's personality in a natural object-saint complex, the more important the tradition of the natural object's inherent sacredness.

It must be stated that reducing the sacredness of natural object-saint complexes only to the mainstream religious expressions of the modern day is likely to introduce bias, and also that the explanations of certain practices offered by our informants are likely to suffer from the same bias. People try to explain their customs in the framework of saint veneration because it is easy and suitable for political and orthodoxical correctness. Therefore, it is necessary not only to ask them to explain the meaning of their practices, but also to consider the religious experience of saints and natural objects by those people from the ritual acts, folklores, and daily expressions of symbolism because often we ignore the level of people's religiosity and are satisfied with explaining their sacredness by historical reductionism. As Takaki mentioned, visiting custom and beliefs of trees in

North Africa shows that Islamic saint veneration has integrated “animistic” or “dendrolatric” beliefs and become complexified (Takaki, 2000, pp. 209-210).

In the villages of South Tunisia, where this study mainly focuses, many olive trees are deeply related with the local veneration of saints. Some olives are venerated for the reason that they were cared for by historical saints (often ancestors) in addition to visit of his grave. In other cases, people visit olive trees as a mark (*mazār*) of a historical saint. Also, we have many cases in which olive trees themselves are regarded as saints. The olive trees are named respectively, and people often watch advents of a spirit or a saint under the sacred olive trees without clear distinction. The people who visit the sacred olive trees treat both saints of natural objects and historical saints in the same manner, visiting, offering, wishing, and sacrificing if their wishes are fulfilled. In this study, their veneration combined with the olive tree is thus called “olive-saint complex.” As Muslim and Muslima, they do not face contradiction with the veneration of historical figures (ancestors) and olive trees and basically their practices look very spontaneous. If a devotee is called by a saint in a dream or any kind of sign, he or she visits the place. It is not fruitful to take their belief as *bid'a* (distortion) or *shirk* (paganism) with the framework of rigid Islam. We can interpret this saint veneration as a syncretic form of Islamic divergence as a result of polyphyletic fusion of Islam and pre-Islamic religious elements that could survive because of its peripheral location.

3. Symbol of olive in the context of veneration of trees

Although the worship of natural objects is regarded as *bid'a* in Quranic teachings, customs involving the symbolic usage of natural objects have been accepted and legitimized through integration into the forms of saint veneration that are admitted by Islam. Not all folklore involving natural objects is associated with Islam, and some natural objects are simply said to possess “power” in a more primitive sense. Westermarck reported the prevailing custom among Amazigh communities in Morocco to sacrifice animal if the heap of grain or olive oil is increasing. This phenomenon is called *qazquza* (excess of *baraka*) and believed to be caused by dangerous power of *jinn* (spirit). Without sacrifice, the family of the farmer would be in danger of death (Westermarck, 1926a, p. 48, 1913, pp. 38-39). If the power is interpreted in a positive light, this “power” can be regarded as *baraka* (blessing), *mleika* (angel), or *walī* (saint) in accordance with orthodoxy. In a negative light, it is regarded as *qazquza* (excess of *baraka*), *jinn*, or *mejnūn* (possessed) (Westermarck, 1926a, p. 48). The phenomenon itself, however, is mostly ambiguous or neutral.

According to the abundant records of folklore and customs collected in Morocco by Westermarck, some of the customs are clearly influenced by Islam, such as “good names of Allah written with olive leaves” (Westermarck, 1933, p. 109) and “olive tree as a sign of the saint’s grave” (Westermarck, 1926a, p. 68). Many of these customs, as we mentioned in chapter 1, also have folk religious elements, however, involving such things as wishing for babies, healing, exorcism, or

magical power. In addition to the concept of the "olive tree as a sign of a saint's grave," which will be discussed in more detail below, I also noted belief in the purifying power of olive trees, specifically "a *jinn* would avoid a person with an olive stick," as seen in the use of a forked olive branch as a talisman against evil eyes (village TZ in Monastir) and in the folklore of a saint who killed a snake by pointing at it with an olive stick (village BK in Medenine), as well as belief in the link between olive trees and fertility, as seen in the ritual scepter called *mutreq*, or *aamout* made of olive wood that is carried by a groom (village T). The scepter is carried by the groom during wedding ceremonies to show his "manhood" and placed in the bedroom on the wedding night. The *mutreq* is deeply related to symbolism of fertility and is evidently the symbol of the male sexual organ and his ability to procreate. There are many such customs linking fertility to olive trees in Tunisia. During the wedding ceremony, for example, old olive fruits that are said to have lots of *baraka* are gifted to unmarried girls wishing to be married soon. Olive oil is drunk not only by pregnant woman for easy delivery but also by men as an aphrodisiac.[19] "Pilgrimage to old olive trees for human and earthy fertility," and the "custom of tying rags to old olive trees" are seen in Tunisia as well as in Morocco (Westermarck, 1926a, pp. 75-76).

These customs and beliefs related to olive trees are similar to those related to tree worship in the pre-monotheistic era throughout the Mediterranean and the Orient. Robertson Smith has shown, with plenty of references, that "tree worship pure and simple, where the tree is in all respects treated as a god," has been practiced in the Middle East (Smith, 1889, pp. 169-176). One example of tree worship in Arabia is the sacred date-palm at Nejran, which was adored and hung with fine clothes and women's ornaments at an annual feast. The symbolism of this tree survives ambivalently as a rich source of religiosity though it is also attacked as heresy and a threat to the uniqueness of the Monotheistic God.

Doughty has described holy groves called *menhel* in southwestern Arabia where the dead are buried and, according to historical Bedouin thought, spirits or angels descend. Living people would visit these groves to be healed by sleeping there, and would sometimes report hearing music, speech, and the footsteps of spirits. If a person was to "pluck any bough, he should be caught away in the air, and be seen no more; or forgetting his mind, be driven continually, without eating or drinking, through the *khala* (desert)" (Doughty 1921: 448-449). Strikingly similar beliefs and folklore are seen in South Tunisia, as discussed below. In another example reported by Doughty, "the sick person will sacrifice a sheep, for his health, or a goat, with blood-sprinkling. He cooks the flesh in the place, and divides it to his friends, and leaves some hanging upon the branches: then he lies down to slumber full of his superstitious faith that the *melaika* (angel) will descend upon him in vision, and speak precepts for his health" (Doughty, 1921, pp. 448-449). The trees identified as possessed are hung

[19] The best portion of olive oil called *ndūgh* is used for procreative purposes, discussed in chapter 4.

with many offerings, including old beads, votive shreds of calico, and strips of colored cloth. Dafni has reviewed these customs and found that the predominant reasons for tying rags to trees include the transfer of disease to the tree, the desire to leave a sign of one's visit, and attempts to soothe the spirit of the tree (Dafni, 2002, p. 325). In Morocco, in contrast, Westermarck reports that, by tying hair or a piece of cloth to a sacred object, the petitioner expects to gain its *baraka* (Westermarck, 1926a, p. 35).

Among the trees, olive trees are a popular object of veneration in North Africa (Dermenghem 1954/2011, p. 136), and the custom of tying rags to them is still practiced in Tunisia in order to wish for a baby, the fulfillment of a wedding, a good match, a successful job, and so on. In other words, olive trees are thought to have power to resolve life's disruptions such as infertility, joblessness, or the unmarried state, as well as to heal physical or mental illness. Pilgrimage to old olive trees in village T in South Tunisia combines this power of the olive tree with saint veneration in a complex manner. I try to examine the claim by Westermarck that tree worship has been practiced since the pre-Islamic Era and survived under the "disguise" of saint veneration comparing with the practices of the pilgrimage to olive trees in village T, then provide more detail about the sacred trees with the narratives on that.

4. Practice of pilgrimage to olive trees

Ziyāra, or visits to the graves of saints, are frequently practiced in Tunisia as well as other North African countries. Similarly, olive farmers in South Tunisia undertake *ziyāra* to old olive trees, which are given particular names as saints, to celebrate harvest festivals and rites of passage and to make special petitions. Today, these *ziyāra* to olive trees are not often practiced in northern or central Tunisia, the centers of olive production. However, it is assumable that they were formerly a prevailing custom among Maghreb countries according to the ethnologies of Westermarck and Dermenghem. In Tunisia, the practice continues, presumably as a remnant of a more widespread practice, in the Amazigh villages of the southern mountains where the Amazigh people were able to resist domination by the Arabs and the French due to the mountains and rocky desert that make up their homeland. Village T is one such Amazigh village where traditional life and customs are deliberately preserved in spite of the population outflow of the Amazigh people. The custom of *ziyāra* to olive trees has remained more prominent here than among the neighboring Amazigh villages. The olive trees that are visited are complexly described in conjunction with ambiguous and obscure references to saints, *jinn*, or ancestors. In this section, the practice of pilgrimage to old olive trees and the beliefs of the pilgrims of village T are described in detail, examined in relation to external conditions, practice, and folklore, and classified into extant symbolical categories.

4.1 Environment of the village

Village T is located about 45 km south-southwest of Gabes, a port city in southern Tunisia. It is one of the few communities in Tunisia still inhabited by Berberphones, although Arabic has replaced it in much of the surrounding regions. The village is surrounded by rocky desert (*reg*) with mountains and wadis at the north end of the Demmer mountain chain, and the annual temperature is 18.8°C. Annual rainfall is as little as 203 mm, falling mainly in winter from October to February. Olives and some figs and dates are cultivated by the traditional agricultural technique for arid land called *jessour*, in which rainwater is stored behind an embankment. Residents also cultivate grains such as wheat, barley, lentils, and fava beans, but the production is not sufficient to feed the population. Accordingly, staple foods such as bread are bought from the northern part of the country. Because the land suitable for agriculture is very limited in this area, the pasturage of goats and sheep is also popular in the desert. People who live in the center of the village often go to the rural desert to feed their flocks. For educational purposes, children generally stay in the village, but adult family members sometimes stay outside to engage in olive farming and pasturage.

The center of the village is located on the top of a mountain. The population of the area is 913, according to statistical data collected by the municipality in 2014, but this number includes village T and other neighboring villages (Table 4). It is expectable that the number of people who live in the village is about half of that. It is said that this number may multiply during holidays. Compared to the 2004 data, the population of the villages in the area seems to have decreased by 36.6% on an average. The level of decrease in the population of village T has been worse than that of the delegation (23.4%) in which village T is located. In particular, the decrease in the number of male inhabitants (45.3%) significantly exceeds that of female inhabitants (28.1%). Thus, village T greatly suffers from the emigration of the male population to other cities or abroad. The village is also famous as the hometown of migrant workers in Tunis (Stephenson 1976: 113). This analysis can be supported by data on the active population (Table 5). An activity rate indicates the percentage of active population to total population. A low activity rate implies vulnerability of a community's manpower supply. The activity rate of the delegation (36.0%) is lower than that of Gabes (41.2%)

	2004	2014	Balance (%)
Total population (Delegation M)	5800	4444	−1356 (23.3%)
Total population (Village T)	1442	913	−529 (36.6%)
Population, Male	714	390	−324 (45.3%)
Population, Female	728	523	−205 (28.1%)
Number of households	382	257	−125 (32.7%)
Number of dwellings	691	501	−190 (27.4%)

Table 4. Population transition (Gouvernorat de Gabès en chiffres 2014, First Census results 2014)

and Tunisia (46.2%). This is one of the main reasons many annual pilgrimages, along with weddings, festivals, *tohol* (ceremony of circumcision), and other events are held in summer. People choose the day for their visit to a sacred site based on when family members living outside the village can be there.

Area	Activity Rate (%)
Delegation M	36.0
Governorate of Gabes	41.2
Tunisia	46.2

Table 5. Activity rate according to area (Gouvernorat de Gabes en chiffres 2014)

According to the indigenous villagers, their ancestors moved to this site from another, deeper mountain about 1500 years ago, and they are very proud of their language, Amazir (*shilha*) or Tamazir, which has almost vanished in the country, apart from a few locations, including this village. The village holds seven original Amazigh clans (*awlad*) and nineteen semi-original Amazigh clans, who came later. There are also four non-Amazigh clans (*a'arouche*) called "Arab" who immigrated to this village in relatively recent years, mainly from Dhība near Lybia. It is difficult to distinguish them by their lifestyles and customs of these three categories of clans. One woman in her sixties who

Type (number)	Name of clan
Original Amazigh (7)	Awlad Yahmed, Il Granta, Il Kräna, Il Idarsa, I Shayha, Awlad Bougizane, I Sbabha
Semi-original Amazigh (19)	Awlad Yahya, Il Awchir, Awlad Mamou, Awlad Marzouq, Awlad Ben Jamea, Awlad Khalef, Awlad Hassen, Awlad Zaïd, Il Ganadra, I Zyatune, I Skakra, I Twaleb, Awlad Bourase, Awlad Mansour, I Srasra, Awlad Azouz, I Srayria, Il Mhatha, Il Mkhalif
Non-Amazigh (4)	Ilanatha, Il Akakria, Il Bith, I Dbaria

Table 6. Groups of clans in village T

immigrated to this village with her family from Yemen when she was very young recalled that she had to learn not only the Amazigh language in order to communicate with the other inhabitants, but also their customs such as weaving, dress, marriage ceremonies, and local saint veneration practices. However, it is said that these families are very conservative and exclusive as they want to protect their culture and language from outside influences. Nowadays many villagers don't speak much Amazigh, especially the younger generation, but they still maintain traditional marriage rules between Amazigh and Arab families (that is, Amazigh woman can marry man from Arab family, but not the opposite). Although there are implicit rules to exclude foreign cultures and the coexistence of Amazigh and "Arab" families has caused some anxiety among them, the immigrants has been, as a

whole, deeply integrated into the traditional Amazigh customs.

4.2 Features of the olive-saint complexes

I have undertaken eight periods of fieldwork between August 2014 and August 2017, consisting of both observation and interviews with 70 individual villagers of more than 20 families. My informants were males and females ranging in age from their 20s to their 90s and including both Amazigh and Arab families of origin. My survey revealed the names of 26 sacred places related to olive trees, of which 20 were observed in the occasion of pilgrimage (Table 7). The list of these places includes all sites where saints are linked to olive trees as reported by the informants. If a sacred place was located in a neighboring village, I included it on the list only if it had been visited by villagers from village T. The natures of venerated objects at these sites are not only human Muslim saints such as *hajj*, but also ancestors, spirits, and olive trees. These are often combined in one sacred place, and the interpretation of what is being venerated at a particular site can vary from informant to informant. Thus, I will call these venerated objects olive-saint complexes, as it is difficult to make a clear distinction among them. Each olive -saint complex seems to function as a sacred being with a complexly expressed image, because the sacred is experienced not analytically but rather as a whole. The sites of these olive-saint complexes are not always connected with a mausoleum (*zāwiya*) containing the coffin of a saint; in fact, most of them don't have it. There is no generic name for olive-saint complexes or their sanctuaries; instead, they are simply called by their individual names such as Camoul Brel or Onm Chemlali. Yet, there does seem to be a certain category like olive-saint complex as understood by the villagers because the names given in response to my question of "what are the names of some saints related to olive trees" were frequently repeated by many different respondents. Those that appear early in the list below (Table 7) are those mentioned most frequently. The names of the olive-saint complexes and the places where they are venerated are listed separately because they are not always identical. The nature of the venerated object is also listed along with the name of the saint. In the case of El Mamoura, for example, El Mamoura is the name of the place, whereas the name of the saint is Mimouna, and its nature is both an olive tree and a *jinnīya* (female spirit).

In the village, a saint is called *walī* (male or female) or *fugīr* (male) / *fugīra* (female), and both male and female saints are venerated deeply. The female-to-male ratio among olive-saint complexes is 3:1, whether human or spirit. This is easily seen from their names, many of which begin with the respectful prefix "*onm*," which literally means "mother" and is also used for "auntie." According to one informant (M, male, 40s), *walī* refers to a Muslim saint, whereas *fugīr* (*fugīra*) refers to a *jinn* or *jinnīya*. Most olive-saint complexes, however, are called *walī* even if they are connected with *jinnīya*.

name of place and type	**name and nature of saint**	***khadem* (caretaker)**	**object to be visited**	**condition of domiciles**	***hadīya* (offerings)**
Camoul Brel (3)	Camoul Brel (olive tree, *jinnīya*)	ex-R (f, dead)→M (m, 50s)	olive tree, nearby small shrine (*kobba*), troglodytic house	troglodytic	red or green scarf or *hizēm* (bellyband), olive oil, *bsisa*, *bukhōr*, animal sacrifice (sheep)
Onm Chemlali (3)	Onm Chemlali (*jinnīya*)	ex-M (m, dead)→ex-T(m, dead)→S(m, 70s)	olive tree, nearby small shrine (*kobba*)	troglodytic	white *hizēm*, scarf, musk, candle, *bsisa*, animal sacrifice
Onm Zīn (2)	Onm Zīn (ancestor, olive tree, *jinnīya*)	A (m), clan F (descendant)	troglodytic house	troglodytic	red or green scarf, *bsisa*, *bukhōr*, animal sacrifice
Chaabet Aīsa (1)	Hajji Ali Bel Mousa (ancestor)	ex-M's mother (f, dead)→M (m, descendant, 90s)	grave of Haj Ali, nearby small shrine (*kobba*), olive tree	troglodytic	red or green scarf, *bsisa*, *bukhōr*, animal sacrifice
El Mamoura (3)	Mimouna (olive tree, *jinnīya*)	ex-Z (f, dead)→ A (f, 90s)	olive tree	—	cloth with olive oil
Hajji Youcef (1)	Sidi Youcef (ancestor)	ex-A (m, dead, descendant)	troglodytic house	troglodytic	candle, *bsisa*, *bukhōr*, *kebda*(liver), animal sacrifice
Onm Zaitouna (3)	Onm Zaitouna/Chemla li Mkari El Fougīra (olive tree, *jinnīya*)	ex-B's mother-in-law→B (f, 90s)	olive tree	troglodytic	*bsisa*, *bukhōr*, *kebda*, animal sacrifice
Zaitoun Mahjoub (1)(3)	Sidi Mahjoub (male saint in Douz)	A (m, deputy)	olive tree	none present	*bsisa*, *bukhōr*, animal sacrifice
Onml Ma´asla (3)	(female, ancient mill)	S (m, 50s), Z (f, 70s)	remains of ancient mill in cave	troglodytic	*bsisa*, *bukhōr*, mulukhiyah, chicken sacrifice
Onm Ilgār (1)	Onm Ilgār (ancestor)	A (m)	troglodytic house, separated olive tree	troglodytic	candle, *bsisa*, *bukhōr*, animal, *hizēm*, money
Bent Chemlali (3)	(olive tree, *jinnīya*)	ex-M (f, dead) →A (m)	olive tree, nearby small shrine (*kobba*)	—	candle, *bsisa*, *bukhōr*, animal sacrifice
Zaitoun Jahfa (3)	(olive tree)	M (m, 70s)	olive tree	troglodytic	*bsisa*, *bukhōr*, animal sacrifice
Fugīra Selma (2)	Fugīra Selma (*jinnīya*)	clan A	a grave, olive tree	troglodytic	*bsisa*, *bukhōr*
Azīza (3)	Onm Aziza (*jinnīya*)	S (m, 30s)	troglodytic house, nearby small troglodytic	troglodytic	*bsisa*, bukhōr, *kebda*, animal sacrifice

			shrine , olive tree		
Onm Zouwīya (3)	Onm Zouwīya (*jinnīya*)	M (m, 50s)	small shrine (*kobba*) on a hill, olive tree	troglodytic	cooking
Onm Zierzi (3)	Onm Zierzi (ancestor)	Z (f, 70s, deputy)	olive tree	troglodytic	*bsisa*, *bukhōr*
Draʿa Sliman (1)	Sidi Sliman (Male saint in Beni Aisa)	A (m)	grave of Sidi Sliman, olive tree	troglodytic	*bsisa*, *bukhōr*, animal sacrifice
Onm Rabbes (3)	Onm Rabbes (*jinnīya*)	K (f, 70s)	olive tree, separate small shrine (troglodytic)	troglodytic	*henna*, bukhōr, animal sacrifice, stalk of wheat
Sidi Mbarak (1)	Sidi Mbarak Ben Wenda Adhībi (ancestor)	M (m, 70s descendant), A (m, 70s, descendant)	grave and zāwiya of Sidi Sliman, olive tree	near to the colony	*henna*, *bsisa*, *bukhōr*, animal sacrifice, fringe of scarf
Lalla Belboula (1)	Lalla Belboula (ancestor)	M (m)	grave of Lalla Belboula, shrine (troglodytic), nearby olive tree	near to the colony	candle, *bukhōr*, animal sacrifice
Onml Krīl	—	—	—	—	—
Onml Maana	—	—	—	—	—
Wlad Ghīn	—	—	—	—	—
Bel Houd	(Male saint)	—	—	—	—
Las Dishel	—	—	—	—	—
Mourarubīr u Zaitouna	—	—	—	—	—

Table 7. Characteristics of olive-saint complex sanctuaries visited by residents of village T
Type (1) Existed ancestors
Type (2) Obscure ancestors that cannot be linked to known individuals
Type (3) Spirits of olive trees or olive trees themselves

Although the years of their deaths are rarely known, we can categorize the saints into three possible groups: (1) existed ancestors, i.e., human beings known from legends and anecdotes, (2) obscure ancestors that cannot be linked to known individuals, and (3) spirits of olive trees or olive trees themselves. For example, in the case of Chaabet Aīsa, the saint called Hajji Ali is said to be a paternal ancestor of the present *khadem* (caretaker) M (male, 90s). He was the first person from the area to accomplish the pilgrimage to Mecca, as shown by his name *Hajji*. He originally came from village Z, which is near village T. He had two sons, and favored one of them named Aīsa, whom he granted his land and the olive, and the descendants of Aīsa have maintained the land and the olive tree. Even though there is no written evidence for this story, it is enough to place Hajji Ali in the first

category. Site number 6, Hajji Youcef, can also be placed in the same group. On the contrary, Onm Zīn does not have a clear figure as a human ancestor in the form of anecdotes, although the site's clan F caretaker is said to be her descendant. This site has an olive tree and a room used as a shrine in a troglodytic house (*camoul*). Pilgrims visit both the tree and the shrine in honor of Onm Zīn. She is said to have been a female saint who lived in this *camoul* long ago, and the olive tree is also regarded as having belonged to her. While her human story is barely sketched out, there are many stories of *jinnīya* in this place. It is therefore likely that the figure of Onm Zīn as a human ancestor was attached to a being understood to be a spirit, and the site is accordingly placed in the second category.

Whereas in categories (1) and (2), the presence of olive trees at the sites is explained derivatively as having been owned by a saint or used by a saint for meditation, sites in category (3) such as Camoul Brel or Onm Chemlali depict olive trees directly as spirits or saints. At such a sanctuary, a small shrine made of stones with a round roof (*kobba*) is typically set in front of a tree. This shrine is dedicated to the tree or its spirit. There are many stories of *jinnīya* associated with such places, and the custom of tying rags to these olive trees is quite popular.

Sanctuaries and mausoleums (*zāwiya*) of saints as well as olive-saint complexes are generally under the management of caretakers called *khadem*[20] or *wakīl*. *Khadem* literally means representative, agent, or trustee. The role of the *khadem* is typically passed down through a descendant clan of a saint, and both males and females can assume the post. The male-to-female ratio among the present and known past *khadem of* olive-saint complexes is roughly 2:1 as seen in Table 7. Their duties are to maintain the sacred place, perform *ziyāra*, distribute offerings to the poor, and sometimes manage gatherings in honor of the saint (*hadra*) or festivals (*zelda*). Because this is not a rigid system, unlike registration of land ownership, it is possible that a saint may have two or three *khadem*s or no *khadem*. Even when villagers disagree about who is the present *khadem* of an olive tree-saint complex, at least they have consensus about the clan of the *khadem*. This is likely because each olive-saint complex belongs to a particular clan in village T which has lived as a family unit and passed down the role of *khadem* from generation to generation. The villagers know who is a *khadem* of the olive-saint complex because they know which clan owns which land. During my fieldwork, I observed several cases in which two persons claimed to be *khadem* of an olive-saint complex; they occasionally met each other during *ziyāra*, acknowledged one another as *khadem*, and shared offerings dedicated to the saint.

The successor to a *khadem* is chosen from the clan members by the *khadem* him/herself. There are no strict rules such as primogeniture governing the inheritance of the role. A tree called Onm Zaitouna, which literally means Mother Olive Tree, is regarded as a very powerful saint and

[20] According to Westermarck, this position is called *mqaddem* (1926: I. 42; I. 168-172; passim). The term *khadem* is possibly derived from the term *mqaddem*.

important for belief in the power of old olive trees. B (female, 90s) was appointed as its *khadem* by the previous *khadem* who was her mother-in-law. She chose B from among her family because of B's sense of closeness to the tree, but also consulted an *imām* of the mosque in the village. The imam asked other villagers whether B would be a suitable *khadem* for Onm Zaitouna. After three weeks, the choice was confirmed and B was permitted to succeed to this position. A *khadem* of this tree has also been called Onm Zaitouna, and is sometimes thought to share the spiritual power possessed by the tree.

The *khadem* is the only person who can harvest the fruits of trees revered as olive-saint complexes; anyone else who attempts to have the fruits will be punished by the saint. The tree's olive oil, however, is not the property of its *khadem* but is customarily given back to the tree as an offering or to the poor as *zakāt* (the Islamic duty of charity). The purpose of becoming a *khadem* is not to earn offerings or olive fruits, but rather, to serve the olive-saint complex and the people. Even if the *khadem* uses the olive oil for his/her own family, people believe it is possible because the *khadem* is permitted to do so by the saint. If the saint dislikes any act of the *khadem*, it is believed that the *khadem* will be punished by the saint. Hajji Ali is said to have appeared to the wife of the *khadem* in a dream, expressed anger at the absence of her husband, and made their daughters have a fatal accident. In another example, a former *khadem* of Onm Chemlali was apparently killed because he wed a woman other than Onm Chemlali. The role of *khadem* in this village is not regulated by an explicit system, but rather, supported by specific, implicit, and spiritual relations between *khadem* and saint.

The geographical distribution of the olive-saint complexes around village T obviously indicates that most of them are located in places distant from the village center (Figure 20). Given that many small mausoleums of normal saints are found in the village center, the location of the olive-saint complexes on the periphery is remarkable. The main reason for this seems to be that the mountains, valleys, and wadis on the periphery have historically been more important for olive cultivation and pasturage than the village center. In the center of village T, there are a grand mosque, an elementary school, a post office, a clinic, and grocery stores. While this site has thus been a focus on trade and governance, the space within the mountaintop village is not large enough for agriculture and pasturage, and it is also difficult to collect enough water to support the population. Therefore, many families have lived in the rocky desert out of the center, where they have built dams (*jessour*) in the valleys to store water for the cultivation of olive trees and other plants, and lived on troglodytic houses under valleys. Such location between hills also makes it easier to get water for people and animals. This is why most olive-saint complexes have troglodytic houses as seen in Table 7: because the sanctuaries are located in the inherited lands of clans which have been used as residential areas and olive farms. In other words, the sacred olive trees are found at the center of the dwellings of small clan-based communities. Thus it is possible to consider that for the member of each clan living

in their valley, their olive saint is the center of their territory, venerated as patron saint or guardian spirit or deity of their land.

Figure 20. Location of the olive-saint complexes and the central village of T

The villagers typically regard life in the desert as more authentic and virtuous than life in the central village. Legends of some saints praise their simple lives spent in the company of animals or olive trees, apart from society; the village mayor, for example, commented that people find the best saints outside the village center. People like to stay in the center for schooling or during the agricultural off-season, but the idea of settling permanently away from their olive trees often engenders feelings of guilt and heightened awareness that their original home is their clan land. By performing *ziyāra* to the olive-saint complexes on their clan land as an annual event or for rites of passage, they return to their ancestral land and olive trees as the center of their community. By occasional pilgrimage, each olive-saint complex plays a role as a tribal tie, and also it strengthens the communication between clans since the villagers also perform pilgrimage to olive-saint complexes out of their own land. I never heard any episodes blaming pilgrimage to other clan's olive tree in the

survey. When they go to the sacred place of other clans, they greet *khadem* of the place and get permission of *ziyāra*, then start pilgrimage. It was obligation because *khadem* and his/her clan used to live in the immediate vicinity of the sacred tree although there are few sacred places where *khadem* lives nearby sacred olive tree.

It is also obligation even now when they come to live in the central village. When they plant to visit olive-saint complex of another clan, basically they have to go with the *khadem* of the sacred place together or need permission of the *khadem* to visit there. As mentioned in the previous chapter, certain parts of the sacrificed animal brought by pilgrims, such as its head and its viscera other than heart and liver are dedicated to the *khadem* after parting. Also, the sacralized food of pilgrimage is shared to the *khadem* and his/her family. While the villagers used to live in different valleys, they, especially women and children did not have many opportunities to interact with other clans. Pilgrimages to olive-saint complexes were rare chances to relate with different clans. Thus it can be suggested that pilgrimage to the olive-saint complex also functions as inter-tribal ties well as inner-tribal ties. The olive-saint complexes are believed as tribal deities individually, and as what reveal the sacredness of olive, and the sacredness of land as a whole.

4.3 Ritual practice

At sanctuaries dedicated to human or semi-human saints categorized in (1) or (2) as described in the above section, pilgrims mainly visit the facilities related to the saint, such as a grave, mausoleum or residence, and visit the olive tree additionally. In the case of Chaabet Aīsa where Hajji Ali is enshrined, pilgrims visit his grave and his descendants' graves near his small shrine. Within a distance of about 20 meters, there is an olive tree called Zaitounat Chaabet Aīsa (olive tree of Chaabet Aīsa), where pilgrims cook food and stay. Offerings (*hadīya*) such as *bsisa* and *bukhōr* are given to the grave, the shrine, and the tree by the mistress of the family or a female petitioner for special requests. To offer the *bsisa*, which is made of barley flour, sugar, and powdered spices, she mixes it with olive oil and sprinkles it with the fingers of her right hand. This action is called *tatīsh* in this area and *nnattro* in Beni Khedache. *Bukhōr* is the smoke of incense, which is made by putting solid incense such as *ruben* (frankincense) or *jawee* (benzoin) into burning charcoal in a small pot. These offerings are prepared under the olive tree and offered to the tree as well as to the path to the grave, and finally placed in the shrine. Any animal sacrifice is performed near the shrine and the animal's gallbladder is placed in the crotch of the olive tree just after its dissection. Pilgrims also keep the liver (*kebda*) for direct sacrifice. The liver is cooked with salt, torn into pieces and offered by *tatīsh* to the tree, the pathway, and the grave and shrine. *Bsisa* and *kebda* are distributed to all pilgrims present and are ideally eaten right away. Participants believe that they will be given the *baraka* of the saint by eating the same foods along with the saint while chanting "*Inshalla Ziyāra Makboura* (May God accept the pilgrimage)."

At category (3) sites such as Camoul Brel or Onm Chemlali, on the other hand, where only a sacred olive tree and its shrine are present, the importance of making offerings to the olive tree is clearer. Whereas the shrine of Hajji Ali faces his grave, the shrines of Camoul Brel and Onm Chemlali both face the olive trees (Figure 21). Some tools such as pots and pans for *bukhōr* are kept in the shrine. During a pilgrimage, the mistress of a family or a female petitioner prepares *bsisa* and *bukhōr*. She goes around the tree in a clockwise direction, performing *tatīsh* of *bsisa* to the tree from all sides, to the shrine, and to the troglodyte house, then gives the remaining *bsisa* to the others to eat. *Bukhōr* is likewise offered to the tree from all sides, then placed in the shrine. Generally speaking, the *bsisa* and *bukhōr* can be offered in reverse order to olive-saint complexes as well as normal saints. It is required, however, to offer these gifts immediately upon arrival at any sanctuary with strong spiritual power, which is described as a "hot place" (*bouk ashoun*; usually understood as a place that is haunted by spirits). Offering *bsisa* and *bukhōr* is a gift to the saint or jinn that is given to soothe and please them and thereby receive their permission to enter the sanctuary. At less powerful sites, however, the requirement of an immediate offering is less strict. During a pilgrimage to Onm Zierzi, for example, a pilgrim (Z, female, 70s) performed the offering of *bsisa* and *bukhōr* just before leaving. She explained that "if we make *ziyāra* to a very "hot place," we have to offer *bsisa* and *bukhōr* soon after arrival, otherwise it will be very dangerous for us. But to the normal place like Onm Zierzi, it can be the last."

As Camoul Brel is considered to have strong power to bring down danger, people avoid entering the sanctuary and even passing near this place on the road if they are not performing a *ziyāra*. For pilgrimages to Camoul Brel, the sacrifice of a goat or sheep is an obligation, whereas in other places this is not always the case. The animal slaughter (*dhubīhah*) is performed by a male pilgrim who must recite the name of God as when animals are slaughtered outside the context of pilgrimage. The animal is held facing Mecca, and set between the tree and the shrine so that it may be offered to both sites. Its *kebda* (liver) is also cooked separately with salt, and offered to the tree from all sides in a clockwise direction and to its shrine by *tatīsh*, then shared with other pilgrims in a manner similar to that seen at Chaabet Aīsa. Along with the remaining meat, pilgrims then prepare couscous and/or other foods to eat there. The leftover couscous is brought back to the house and shared with other relatives, as it is regarded as being full of *baraka*. Anyone can do the cooking, but the *tatīsh* of the *bsisa* and *kebda* and the offering of the *bukhōr* should be done by a woman, typically by the mistress of the family or a female petitioner who comes to ask the saint for a special wish. If the petitioner is man, his mother or wife must perform these duties.

There are two types of *ziyāra* with two different purposes: communal pilgrimages that are performed at certain times of year, and individual pilgrimages for rites of passage or personal problems. In communal pilgrimages, ideally, all members of the family go to the local olive-saint complex related to their clan; in summer, they go to wish for a good harvest, and in spring, they go

to give thanks for the harvest. Some families visit their olive-saint complex after *Eid al-Adha* or at the celebration of the new year (*Ehtifēl*) in their local calendar as *sena al-ajamīya*,[21] or after *Āshūrā*, the 10th day of the first month of the Islamic calendar. On such an occasion, many members living outside the village come back to attend this *ziyāra* with family. It has a strong connotation of returning to one's ancestral land as mentioned above.

Figure 21. Onm Chemlali and its *kobba*

Individual pilgrimages, such as those made to wish for a personal request, on the other hand, are normally performed only by the petitioner and his/her close family members. These requests may include the fulfillment of a wedding, a good marital match, the birth of a baby, academic success, job success, finding a lost object, spell and dispel of magic. Among these, the most popular requests made to the olive-saint complexes in category (3) are for marriage and babies. At Camoul Brel, women tie their *hizēm* (traditional woolen belt for women) or scarf to the branch of the olive tree to make their wish. This knot (*okda*) should not be untied until their wish is fulfilled. The branch on which it is tied should have no other knots. The colors of these votive clothes are chosen according to the nature of the request. If the wish is for a wedding, the cloth should be red, which is the color of a bride's veil, and if it is for a baby, the cloth should be a white *hizēm*, which is worn by married women and used as a belly band, or a similar white cloth. The pilgrim C (female, 30s) and her mother S (female, 60s) mentioned that only women can perform this ritual of tying cloth to olive trees and that olive saints only do favors for women. If a man has a request, his mother or wife will make the request to the tree. As there is a special spiritual relation between an olive-saint complex and its *khadem*, women are likewise believed to have strong connections with such olive trees.

Although tied scarves or *hizēm* are seen at many olive-saint complex sites, other objects such as the fringe of a scarf, a flag, or a cap are also sometimes used (Camoul Brel, Onm Zīn). Furthermore, olive oil in a bottle (Onm Ilgār), a fire in which an olive oil-soaked cloth is burned (El Mamoura), or

[21] It literally means the calendar of non-Arabs, which originated as the Julian calendar introduced in the Period of the Roman Empire. It is discussed in the next chapter.

a stalk of wheat (Onm Rabbēs) can also be a votive offering. It is worth noting that the petitioner typically promises (*wa'ada*) the saint that she will do something if her request is fulfilled. F (female, 30s), a pilgrim to Sidi Mbarak, promised that "If God gives me children, I will come back to open this knot and make a *wa'ada*," i.e., to come back to visit the saint and to prepare food and distribute it to others. Tying such knots has been regarded as black magic and criticized by official Islam as mentioned in the Quran (113.4). Nevertheless, offerings of one's own clothes or a part of body at sacred sites are made worldwide. They are interpreted as symbolic actions for the purposes of communication with the sacred based on religious sensitivity and eagerness to be with or near the sacred (Eliade, 1957/1959, pp. 42-43).

Because the fruits of the sacred olive trees belong to the olive-saint complex, carrying them out or pressing them is forbidden to all except the *khadem*, although they can be eaten at the sanctuary. There are many folktales prohibiting attempts to possess these olives; in one of these, thieves who take the olive fruits of a saint and pile them on a wagon are crushed by falling stones (S, male, 70s); in another, when someone tries to press olive fruits taken from a sanctuary, the mill (*ma'asla*) is broken (H, male, 70s). Even the olives harvested by the *khadem* should also be mostly given back to the tree after pressing. More than half of the oil from Zaitounat Chaabet Aīsa should be offered to the tree on the day of pressing during a celebration with music in hopes of a good harvest. In the case of Zaitoun Mahjoub, 20 liters of oil should be kept in a tank inside the tree, and the people who visit this site mix this oil with their *bsisa* and offer it to the tree. The rest is kept in the mausoleum of Sidi Mahjoub in bottles which poor pilgrims can take home. People believe that the olive oil from sacred olive trees is not the property of any one person, although in general the purpose of every olive tree is to produce fruits for harvest. The special treatment of this olive oil functions as a sacrifice of agricultural products along the same lines as the animal sacrifices that are made during pilgrimages.

On pilgrimages to olive-saint complexes, sacrifice and eating together assume critically important roles because these rituals are based on the religious sense that the energy of the world comes from outside as spirits or ancestors bring fertility. People return the results of mundane activity toward the sacred world in the form of offerings or sacrifices, and in this way, the world is purified and renewed. Communal feast (eating *bsisa* or couscous) is necessary for the same reason. Through eating together with the sacred being, man can be renewed (i.e., can receive *baraka*), and the practice reminds us of the meaning of food as something that we do not create by ourselves but rather, that is created and given to us. The food is sanctified by being offered to the sacred reality, then given to the people and shared. Eating together with all participants or attendees at a pilgrimage symbolizes the inclusion of all human beings in the feast.

4.4 Folktales of olive-saint complexes

On occasions of *ziyāra* to olive-saint complexes, people often tell and retell mysterious stories of the saints and spirits. These are not only legends from long ago but also current folktales experienced by themselves. The saints and spirits may appear to the villagers in dreams or during wakefulness in different forms. The experience of such a manifestation of a supernatural existence is at the center of all religious phenomena; Rudolf Otto calls them *das Numinöse* in his study about the sacred. He criticized the rational and ethical idea of the term "the sacred (*das Heilige*)" as it is generally used, calling it just a secondary meaning. In contrast, he defined *das Numinöse* as religious feelings experienced irrationally and directly, and claimed that these represent the original meaning of "the sacred." His coinage *Numinöse* is composed of the noun *Numen*, which means divinity or divine presence in Latin. It means "a unique numinous category of value and of a definitely numinous state of mind, which is always found wherever the category is applied." Thus, it is a feeling that arises inside the subject who perceives the object which is a divine presence. The primal element of the experience of *Numinöse*, Otto argued, is objectiveness; to sense an existence outside of the self, and the deepest and most fundamental element of such religious emotion is "awe," also called *mysterium tremendium* (1923/1936, pp. 7ff.).

Among the several types of miraculous stories of olive-saint complexes, manifestations as women are reported in the largest number. The main reason for such manifestations is as punishment for the violation of the sanctuary by provoking an "awe-ful" experience. By inquiring how these olive-saint complexes appear to people and how they are experienced, we can uncover the meaning of these folktales of religious experience. They are divided into seven types according to the appearance of the manifestation, each of which will be discussed separately below.

(1) Manifestations of women

Most of the olive-saint complexes around village T are seen in the forms of women, suddenly and in the daytime as an interruption into this world. Below are the experiences of the manifestation of olive-saint complexes told by the villagers.

> After making a *ziyāra*, a man picked olive fruits from Camoul Brel and stuffed his pockets. When he was about to leave the place, something was thrown toward him from behind. With suspicion, he turned and saw a beautiful woman. Surprised, he slipped and all of the fruits fell out of his pockets. He shut himself in his house and did not talk for six months. (B, female, 90s)

> The family of the mother of H had offered 1 kg meat to the olive tree of Onm Zīn every year. One day during their *ziyāra*, a woman appeared near the tree and said "One kilogram of meat is not enough, offer one sheep!" The mother of H claimed that she did not have a sheep. Then the woman said, "Look around." She looked around as the woman had said, and found a sheep under

the tree. The family then sacrificed the sheep to the *jinnīya* of the tree. (H, male, 70s)

T, an ex-*khadem*, and M, the *khadem* prior to T, saw Onm Chemlali. She was a beautiful woman in a red dress and was walking around her olive tree. (S, male, 80s)

When a sister-in law of A was drawing water at El Mamoura, Mimouna appeared and said "Don't draw this water and don't take the figs." She was frightened and ran home. A's father admonished her, saying, "That is why I said not to go to El Mamoura!" (A, female, 90s)

The brother and father of A saw a woman in a white dress at Onm Zouwiya. When they approached, however, nobody was there. It happened because the place has been very "hot" (*bouk ashouna*). (A, male, 50s)

Onm Ilgār had not been known as a powerful saint. Once, a woman appeared in the dream of an old woman and told her to come to the sanctuary with her family. She brought her family to the sanctuary, but the others with her did not believe in the power of Onm Ilgār. They stayed one night, during which everyone present had the same dream of Onm Ilgār. Then they knew that she was a very powerful saint. (S, female, 30s)

The sanctuary of Azīza is too powerful to pass in the night. Onm Azīza wears a white dress like that of a bride on "the day of palanquin." When some persons took fig fruits from this place and tried to bring them home, a woman with a white cloth appeared and stopped them. We can eat any fruits from this place while we are here, but we cannot bring them out. (M, male, 70s)

Onm Rabbēs and her many daughters are believed to stay at a cave and an olive tree. The *khadem* H smells the scent of *jaawee* incense and hears the sounds of a marriage ceremony every Friday. She is aware of the presence of Onm Rabbēs by these signs. Sometimes, she sees lights and also Onm Rabbēs herself, who looks neither young nor old. (H, female, 70s)

Except for Onm Ilgār, these manifested women are considered *jinnīya* (female spirits). The frequency of manifestations of women near olive trees shows that olive-saint complexes are expressed as feminine. Olive trees are also spoken of metaphorically as being female. The beauty of olive trees is often compared with the beauty of women in their local songs i.e., black olive fruits for women's black eyes, and broad base of olive trees for big hips of women. Many are given female names with the prefix of Onm. When people visit the olive trees, pay their respects, and consult the olive tree-saint complexes about their problems, it is almost like they are returning to their ancestral

homelands, greeting and honoring their mothers and aunties, and asking them for advice. Additionally, the olive tree-saint complexes frequently appear as women in the context of a wedding, which is the most important rite of passage for women. Pilgrims, the majority of whom are women, report feeling the presence and female power of olive trees or *jinnīya*. One informant said that a petitioner should write her own name along with those of her mother and maternal grandmother onto the offered cloth to show her maternal family origins. This evidence leads us to suppose that the veneration of these trees and their specifically feminine olive-saint complexes has been passed down in the mythical world of women from mother to daughter, because it complements the religiosity of women, which is subsidiary to that of men in mainstream Islam.

(2) Marriage with *Jinnīya*

In keeping with the femininity of the olive trees, there are also folktales of marriage with the female spirits of olive trees. This is not reported to have happened at many olive-saint complexes in village T, but stories of men being married or nearly married to female spirits are told. This type of folklore is also reported in neighboring villages.

> T, a *khadem* of Onm Chemlali, was doing agricultural work at the sanctuary. While he took a nap for rest, all of his farmwork was finished, and his lunch was prepared although no one was there to cook it. He always won fights, even against many other men, and could catch fire with his bare hands. He had these powers because he was married to a *jinnīya*. His spiritual wife could not be seen by anyone but himself. She disliked the idea of him having another wife, whether human or *jinnīya*, and warned him that if he married another woman, he would die. As she said, he and his new wife died just after their wedding. (M, male, 90s)

> A, a *khadem* of Onm Zīn, sometimes found that his lunch had been prepared while he was working to care for the olive tree. His co-workers wondered about this and asked whether he brought his wife to do it, but he never replied. Many people knew that he was in contact with the *jinnīya* of this tree. (H, male, 50s)

> Another man working to care for the olive trees at Onm Zīn found a lunch and a beautiful woman in a white dress. She asked him whether he was married. He was very terrified and ran home. (H, male, 70s)

> The clan of A has hereditarily taken care of the tree of Jīmnya and is said to have a relationship with the *jinnīya* of this tree. The current *khadem* has never married, and people say that he is married to a spiritual wife. Sometimes, people find that his lunch has been prepared though no

one is near. (Refers to an olive -saint complex near village T, M, male, 80s)

Such stories of marriage with *jinnīya* fit into a pattern of folklore that is known not only in North Africa but in the Middle East as well, though it is not limited to the spirits of olive trees. As in many other stories conforming to this pattern of mythological heterogamy that are told throughout the world, spirit marriage is the explanation for a male's special fortune or power.[22] In village T, several stories are told about men, usually *khadem*, working to care for a sanctuary who are given rewards for their work by female spirits. Stories of the seduction of men by *jinnīya*, who are famous for their beauty and high libido, may be related to Moroccan legends of Aisha Qandisha, who is a degraded form of Astarte, a fertility goddess of Phoenicia (Westermarck, 1933, p. 21). Although their lust makes *jinnīya* powerfully sexually attractive and rich in fertility, it also makes them highly likely to bring catastrophe on the physical world (nomos). This is shown in the story about Onm Chemlali, in which disaster befell a man who had got married to the *jinnīya*. A relationship with a *jinnīya* can bring not only blessings but also curses and danger due to her excessive passion expressed as irrationality or strong envy that is uncontrollable by humans.

(3) Manifestations of men

There are exceptions to humans' inability to control spirits, namely, the saints, especially male saints. The olive trees at male saints' sanctuaries as well as the trees' spirits are typically said to have been owned by the saints during their lifetimes, but stories of manifestations of male saints are very rare. In practice, folklore makes no distinction between male human saints and male spirits.

Near the grave of Hajji Ali, an old man was seen. People thought that he was the *jinn* of this place. (H, male, 30s)

During pilgrimages to Sidi Mbarak, people sleep next to his coffin wearing white clothes in hopes of seeing the saint in a dream. Sidi Mbarak does sometimes appear in dreams as a beautiful old man who speaks to the dreamers. (A, male, 70s)

Hajji Ali appeared in the dream of A, wife of the *khadem*. He asked her where his *khadem* was, but she couldn't answer. Then he stabbed her stomach with an arm-sized syringe. Being afraid of this dream, she asked her husband to sacrifice a sheep to the saint but he did not do it. This caused their two daughters to be involved in a fatal car accident in which one of them was killed. (A, female, 90s)

[22] Westermarck 1926: I. 266, Mardrus 2004, "Tales of second sheikh."

In contrast to the fact that most saints venerated in Maghreb countries these days are male, the number of male olive-saint complexes at village T is very small, being only one-third the number of females. Furthermore, all the male saints are said to be human saints who existed in history, as hajji or as persons buried at the sanctuary. The olive trees at these sites as well as the trees' spirits are said to have belonged to human saints during their lifetimes. Visiting local deities or ancestors to pray for a good harvest or to see one's fortune in a dream seems to have been generally performed since the Hellenic era in Maghreb countries (Brett & Fentress, 1996/2007, pp. 34-35). Rituals of this type, which includes fertility rituals for both agricultural and human pregnancy, serve as the basis for saint veneration in North Africa. Although male saints may appear to differ from the female spirits of olive trees in some details, we can say that both are connected with spirits of nature.

(4) Appearance and influence on animals

Among the folktales related to animals at the sanctuaries of olive-saint complexes, there are two types: those involving the transformation of spirits into animals and those involving sensitive mysterious actions of animals. Many people believe that animals have superior ability to perceive the supernatural and that they can convey the presence or communicate the desires of saints or spirits to humans indirectly.

> Some people from village Z tried to cut branches from the olive tree of Hajji Ali to bring them home, but the donkey harnessed to their wagon was not able to move with the branches on the wagon. (M, male, 90s)

> If a female petitioner sees a white horse during a *ziyāra* to Hajji Ali to wish for a baby, soon she will be pregnant. Hajji Ali also keeps many snakes in his sanctuary, and when A tried to drink abortive medicine, a snake got entangled around her neck to stop her. This was seen by her husband M. (M, male, 90s and A, female, 90s)

> H visited Camoul Brel with 60 people nine years previously. The women slept inside the troglodytic house while the men slept under the olive tree of Camoul Brel. In the morning, they saw many snakes around the tree, but the snakes never attacked the men. This was understood to be because of protection by the spirits and the *baraka* of the tree. (H, male, 30s)

> Onm Chemlali loves animals such as rabbits and birds. One day the brother of the *khadem* S shot a rabbit at the site. When he approached to take it, it revived and wiped its face, then ran. He shot it again, and the rabbit fell down, but got up again, and again wiped its face. He stopped hunting

it and consulted with S, who told his brother that this was happening because of the strong power of the saint. (S, male, 70s)

Sometimes, Onm Chemlali appears as a cat or a rabbit. M's daughter always sees a rabbit at the sanctuary. If she catches it, however, it will disappear. This is because Onm Chemlali is not a human but a *jinnīya*. (M, female, 60s)

During the fight against French occupation, M stayed at the sanctuary of Fugīra Selma for two nights with a man from Douz to defend the village against the French army. The other man wanted to go home to see his wife. As he was leaving the place, however, a very long shadow appeared and barred his way. He and M then saw an impossibly tall woman who must have been a *jinnīya*. She became first a donkey then a dog. The man gave up and returned because he was afraid of Fugīra Selma. M thought that this occurred to prevent the man from telling secrets to the French army. (M, male, 90s)

These cases indicate the taboo of killing wild animals in sanctuaries and the closeness of the saints and spirits to animals. This closeness to animals is linked to saints' requests for animal sacrifices, as mentioned above. For pastoralists, livestock are naturally regarded more as property or capital rather than in the same manner as wild animals. While some olive-saint complexes prohibit the hunting of wild animals, other olive-saint complexes demand that people sacrifice livestock. Both these demands can be interpreted as warnings against the misunderstanding of creatures as our property. Only when it is sacrificed can a sheep that was viewed as property be seen as an animal. By taking otherwise useful animals away from people through wildlife protection or livestock sacrifice, olive-saint complexes recover creatures and the world as significant in their own right.

(5) Blessings

When people explain why they perform *ziyāra* to olive-saint complexes, they speak of the *baraka* of the saints and the specific help they hope to get from them. To prove the power and virtuousness of the saints, specific instances of grace and blessing are described in stories.

B's granddaughter stayed eight nights at Onm Zaitouna to wish for a good job. As a result, she now holds a high position in France. (B, female, 90s)

Even in years without rain, there is rain in the sanctuary of Zaitoun Mahjoub. Olive trees generally bear only in alternate years, but the olive tree of Zaitoun Mahjoub bears many fruits every year because the place is very powerful. (B, male, 50s)

A's son was not good at study, so he performed *ziyāra* and recited Quran for Sidi Mbarak. One month later, he achieved top marks in his exams. He knew the answers to all the questions as though a teacher were standing behind him to help. He went to university and got a job in France. Now, he lives in France with his French wife. (A, male, 70s)

Before Tunisian independence, men carried guns, but the French army had started to restrict this. One day, M came across a cavalry of 20 soldiers near Onm Chemlali. Being afraid that they would discover his gun, he hid inside the tree of Onm Chemlali following his mother's advice. After a while, he went up to the hill and found nobody. Onm Chemlali had swept away the French army with her power. (S, male, 70s)

When sexual intercourse is not achieved properly on the first night of marriage, if it is because of a problem with the woman (i.e., *msafhal* meaning "closed"), the couple performs a *ziyāra* to Sidi Mbarak. If it is because of a problem with the man (i.e., *ma'argel* meaning erectile dysfunction), the husband and his mother visit Draʿa Sliman to solve this problem. *Ma'argel* is thought to happen due to someone's spell. They should stay one day and night and offer a sacrifice of a sheep or goat to the saint. The problem will then be resolved. (Z, female, 70s)

Healing or undoing a spell, as in the last example, is often performed at olive-saint complexes. Marriage and babies are the most popular requests associated with *ziyāra*. Although it seems that many people experience positive results of their visits for marriage and babies, they do not talk of their personal experiences as examples of the saints' *baraka* because these stories are too symbolically embedded in their lives as rites of passage. While marriage and babies are matters of great importance for individual petitioners, they are also important to the community and are thus greater than mere personal problems. This is why pilgrimages to olive-saint complexes for such requests functions as a rite of passage. Petitioners whose wishes were granted must return to the saint's sanctuaries on the ceremonies of their weddings and their children's births to offer thanksgiving.

(6) Punishments and nightmares

The power of olive-saint complexes is expressed more frequently through tales of punishments such as nervousness, madness, and destruction than through tales of blessing or help. The people in village T told stories of terrifying experiences more vividly because such "awe-ful" experiences make them feel the existence of the saints more powerfully than tales of blessings do.

On his last visit to Onm Zouwīya, A said "There is nothing in Onm Zouwīya." Later, he found that the tire of his buggy was punctured. (A, male, 50s)

A man cut the branches of Onm Zaitouna and fed them to his sheep. The next day, the sheep was dead. (B, female, 90s)

About 150 years ago, some men cut the branches of the olive tree of Hajji Ali and tried to take them away in a wagon, but all of them suddenly seemed to be held with invisible handcuffs and fetters near the tree. The family of the *khadem* came and asked the saint to pardon them. They were then able to return home. (A, female, 90s)

Once, there was a shrine for Mimouna, but a man crushed it. He became mad and died. (A, female, 90s)

S picked figs at Azīza. He knew that he was not supposed to bring them home, but he did anyway. He saw a woman as he was leaving the site, and now he cannot walk because of what he did. (Z, female, 70s)

People gain a more powerful sense of the reality of the olive-saint complexes from stories of their awe-ful power than from stories of their merciful power. This is because the awe-ful power is beyond human anticipation, that is, beyond a secular understanding of the world. The manifestation of the sacred could destroy man's plans and evocate his existence, and that is an essential quality of the sacred.

Among the ominous symptoms caused by a saint or spirit's anger, insomnia and nightmares are especially pervasive. These function as a warning before a harsher punishment is issued, providing a grace period for atonement. Through experiencing insomnia or nightmares, people can become aware of any blasphemy or violation of the saint's wishes that they may have done without intention and have a chance to apologize.

A few years ago, C made a pilgrimage to Camoul Brel with the family of her aunt. After eating lunch, the people saw a big pillar of flame at its *kobba* (shrine). But when they approached, it was not burning at all. This happened because the family had been thinking about things other than the saint and had said bad things about other people. The fire on the *kobba* occurred because Camoul Brel did not like their behavior. Since then, C has not been able to get this incident out of her mind and has suffered from insomnia, and when she does sleep, she has nightmares and wakes soon. Although she has a two-month-old baby, she visited Camoul Brel because she

dreamed of Camoul Brel on the previous night. (C, female, 30s)

About 10 years ago, S and her husband A worked at a farm near Camoul Brel. One day they passed by the site without making any offerings. S began to suffer from insomnia and several family problems occurred. S and A then performed *ziyāra* and sacrifice for the tree. (S, female 60s)

B's husband cut the branches of Onm Zaitouna although B was the *khadem*. He couldn't sleep for four nights. The next time she visited the tree, she noticed what he had done. She offered a goat, *bsīsa* and *bukhōr*, and the problem was resolved. (B, female, 90s)

H is a shepherd who often takes animals to the area near Onm Ilgār. About four years ago, he sometimes lost sheep and couldn't find them. One person told him that it was because he came to the sanctuary but never gave offerings. H also hunted rabbits there. Onm Ilgār did not like it and made it so he could not sleep well. Finally, he had a dream that he had to visit the place to offer. Then, he performed *ziyāra* and offer a sacrifice of a sheep. The problems were swept away. (H, male, 30s)

As shown above, dreams have been and remain an important channel for contact with local spirits or ancestors in the Maghreb region.[23] Today, people still sleep near the coffin or under the olive tree of a saint to see him/her in a different time, which is active participation in sacred time. In contrast, insomnia and nightmares are disquieting ruptures of secular time caused by the sacred.

The miracles of the olive-saint complexes are phantasmagorical, terrifying, irrational, and destructive. These characteristics are far removed from those of the ideal saint in Islam, who is modest and ethical. According to the classification by Dermenghem between popular saints and serious saints (Dermenghem, 1954/2011, p. 11), the olive-saint complexes at village T are mostly categorized as popular saints that possess rather, the objective sainthood than subjective. Yet, the features of olive-saint complexes and popular saints are difficult to understand as those of human beings. While real saints such as Sufi experience the sacred, popular saints are experienced by the people as the sacred. It is necessary for us to conclude from their expressions how people experience the olive-saint complexes.

The meanings of the saints' manifestations and the desires that they communicate must be interpreted by the people. They can include demands, anger, warnings, and sometimes blessings. Most of them, however, are simply *mysterium tremendium*, 'the deepest and most fundamental

[23] Please refer to Doutte 1909 : 412, Basset 1920 : 61, Brett et al. 2007: 34-35, Herodotus: iv-172.

element in all strong and sincerely felt religious emotion', as defined by Otto (1923/1936, p. 12). Normally, people carry out their domestic, agricultural, or pastoral labors according to expectations and plans they have made based on the rules of their own world. When a phenomenon such as the manifestation of a saint makes them aware of the reality of the divine existence, their interpretations of the conventional world can shift (anomie), and the new meaning of the world is created based on the significance of this phenomenon. In short, it enables people to experience the destruction of human-made plans and to participate in the divine cosmos that is newly created.

Graceful manifestations of the saints and spirits, on the other hand, are easily regarded as supportive of the existing world and as extensions of this world. Their impact is too gentle for them to serve as momentum to break down the reality of this world. In this context, this world can be considered rather as an 'imitation of the primordial time' (*illo temporo*), like those widely seen in the creation myths of archaic religions (Eliade, 1957/1959, p. 82). As reported in Morocco, the blessing of the harvest is regarded as a manifestation of destructive power against the human-scaled world in the form of an excess of *baraka* (*qazquza*) that gives farmers dangerous power in harvested grains or olive oil.[24] Even though their creation myth has been lost, the manifestations of the olive-saint complexes show that olives, which are cultivated and harvested for the profit of human beings, originated outside the world, and thus, the return of human profit as sacrifice should be performed as it was in mythical times.

5. Symbolism of olive-related saints

We have already described the features, rituals, and folktales of olive-saint complexes. From these, it becomes possible to identify certain symbolical elements linked to the olive tree, such as the Muslim saint, the ancestor, the spirit, and the mother. Each factor has multiple influences on the olive -saint complex. The first factor is the image of real saints who were prominent in the Maghreb area, perhaps because of missionary work teaching the local people about Islam, establishing a Quranic school, or exerting supernatural power (*karāma*) to bring rain or defeat enemies. This establishes a framework of saint veneration that is also popular in other areas and neighboring villages, where saints such as Sidi Yakhref, Sidi Abdelkader of village Z, Shamseddine, and Sidi Ali Boumedien of Delegation B are venerated. They are known in these areas as pious saints representing Islam, and their shrines attract pilgrims from nearby villages. Among the olive-saint complexes at village T, however, this factor is not influential except at Sidi Mbarak. According to legend, this saint is said to have been a descendant of the Prophet and to prefer the recitation of Quran as an offering. There is no anecdote about his missionary contributions to Islam, only a story

[24] Westermarck reported that when the pile of grains or olive oil increases after harvest, the animal sacrifice should be performed otherwise the children of other family of the farmer will be dead (1926: I. 220-221).

of his origin. Additionally, his preference for the Quran, his supernatural power, and his simple life in the desert with animals apart from people correspond with the image of the ideal Muslim. Especially his *karāma* of teleportation and telecommunication are told as proof of his outstanding *baraka* as a friend of God. He is not identified with his olive tree but it is set in his sanctuary complementally. Many pilgrims visit his coffin only, though some women with special petitions visit the olive tree also.

The second image, that of the ancestor, is seen vividly in the fact that many *khadem*s claim to be descendants of the saints, and that most of the olive-saint complexes are located in the lands where particular clans have lived and where they regularly return on pilgrimage as a family unit. Each clan's olive-saint complex, who has been venerated for generations, is a guardian of their land, called by the name of ancestor. Through being visited by descendants, it serves as a family tie for the tribal community as well as the center of their colony. In practice, it is difficult to make a clear distinction between ancestors and spirits because, as in the case of Hajji Ali, the figure of an ancestor may come to be strongly influenced by the image of a spirit, developing characteristics like affiliation with snakes and the ability to create fire. The syncretism of ancestors and spirits is a general phenomenon in archaic religions such as Totemism or ancestor worship, which seems to be a distinctive feature of the ancient religion of North Africa. Brett et al. discussed that the ancient 'Berber' tribes had considered the spirits as their ancestral deities according to the Greco-Roman descriptions of Herodotus and Pomponius Mela, mentioning that "the funerary elements are mixed with fairly clear references to fertility...This complicated iconography and the provision of space for sleepers to dream--the practice is called incubation—suggest that the sanctuary was used for communication with the dead and also suggest the role of the spirits in ensuring human fertility" (Brett & Fentress, 1996/2007, p. 35). The idea that all life and all fertility of land and humans comes from and returns to somewhere that is not here is a prevailing understanding of the world. In this regard, both tomb and dream symbolically represent the marginality between this world and that world. The ancient ritual action of visiting spiritual ancestors to pray for the prosperity of descendants and get oracles in dreams has survived in the form of pilgrimage to olive-saint complexes to wish for marriage and babies.

The spirits of olive-saint complexes are most often described as *jinn* or rather, primarily, as *jinnīya*. It is notable that folktales of manifestations of *jinnīya* are much more frequent than those of *jinn*, and there are no folktales about human women being married to *jinn*, though there are many of the opposite kind, as described above. I also found that the female appearance of the olive-saint complexes was often based on the image of a bride or wife. In contrast to the appearances of male spirits, who appear as old men with saintly attributes, those of female spirits are beautiful, dressing and acting like brides, and practical, helping like good wives. These features of their appearance indicate the otherness and marginality of brides in accordance with the custom of patrilocal

residence in this village. In a patrilocal society, where the bride is taken into the groom's family, the bride is considered peripheral or marginal. While she herself is in transition during the wedding ceremony, she is also an outsider who intervenes in the community's previous daily life from the groom's family's viewpoint. She is the one who is brought in from outside the community, as *baraka* is brought in from outside the world. The female spirit thus symbolizes the similarities between femininity and the sacred in its appearance.

Lastly, the identification of these olive trees with the character of the mother is clearly indicated by the frequent use of the prefix Onm for the saints, as in Onm Zaitouna, which means Mother Olive, or Onm Chemlali, Chemlali being the name of the variety of that olive tree. The olive trees are also strongly connected with rites of passage for women, such as marriage and childbirth. As a part of the wedding ceremony, a *ziyāra* is performed to the clan's olive tree. El Mamoura is visited by brides offering henna and singing an orally inherited song for the saint. She is praised as an eminent lady and is invited to the wedding ceremony.

Mimouna Ya Mimouna
[Mimouna Madame Mimouna]
Sabbari ʻala ʻaroug zaytouna
[Water storage for the root of the olive tree]
Ya ndri Ya Khalti
[Madame Mimouna keeps all (water)]
Sabi Ala Gatayeti
[(People) wash (her) trunk]
Gatayeti Madhouna
[(No problem for washing) the trunk is protected with many layers]
Bash Zīte Zītouna
[Residue of oil is for the olive tree]
Basha Nadi Khalti
[(Family) comes back to Madame Mimouna]
Fi ʻAarse Ylala
[(Please come) in (my) marriage, Madame!][25]

[25] Song and supplementary explanation from my informant A, female, 90s.

In this village, an olive tree in flower is sometimes called an *'arousa* (bride)' due to the expectation that it will shortly bear many fruits. Its symbol is embroidered on garments for the wedding ceremony as a charm for a prosperous life. Unmarried girls perform *ziyāra* in order to wish for a good marriage, and the leftover couscous that was prepared and eaten during the *ziyāra* is also said to have good *baraka* for a happy marriage, so each unmarried girl tries to get it competitively. On the palanquin which carries a bride from her house to the groom on the wedding day, an olive branch is placed as a symbol of happiness and fertility. The olive tree is also depicted as a mother in the story of the *jinnīya* Onm Rabbēs. She has a great many daughters, and her prolific nature is a peculiar character of the archaic mother goddess of earth. In the archaic religions, agriculture is symbolically related to procreation and childbirth. It is likely that the association of motherhood with the mother goddess who bestows fertility on the earth and humans is essential to the symbolism of the olive-saint complexes in village T.

Figure 22. Symbol of olive tree with flowers

Through this study of the olive-saint complexes in village T and their relationships with the symbols of ancestor, spirit, and mother, I have concluded that this custom of 'saint veneration' is located outside the framework of Islam. The custom is more closely linked to the archaic symbolism of ancestor veneration, spirit worship, or tree veneration than it is to Islamic faith and practice. The spirits or ancestors associated with the live trees are thought to introduce the fecundity of people, which is connected to the fertility of the earth, from the margins of the world into the world we know. Pilgrimage to olive-saint complexes is a form of worship of the "tree of life," a symbolic tree with the power to bring people life, which is featured in many religions and is an agricultural ritual whose universal motif is death and rebirth. The original meaning of any agricultural ritual is to see the cosmos as an entire cycle of lives in which the world returns to its beginning and repeats its cosmogony (Eliade, 1957/1959, p. 31). Among the religious phenomena in village T, the center of the cycle of lives is the experience of the olive tree as a bridge between the world of spirits and the world of humans comparable to the biblical symbol of a tree as a ladder between heaven and earth.

All sacred things such as spirits, ancestors, life, blessings, and supernatural power are experienced as having come from the other place beyond the tree to this world, then returning to their place of origin.

Pilgrims visiting the olive-saint complexes can be inspired to become a new person when they visit on the occasion of rite of passage, and can be healed and reconditioned in times of trouble; in other words, they can experience the sacred through these pilgrimages. The annual collective pilgrimage to offer olive oil or an animal sacrifice is a return of the harvest, which is symbolic of their lives, to the tree, and thus, symbolically to the origin point outside the world as a repetition of the cosmic cycle. According to the above interpretation, it becomes clear that pilgrimage to olive-saint complexes in village T is a religious experience of the trees made particularly important by the cultivation of the olive.

6. Conclusion

In this chapter, I discussed how pilgrimage to old olive trees relates to both saint veneration and the symbolism of trees with the references to tree worship in general, process of pilgrimage to olive-saint complexes, legends and other narratives on them. In many cases, these olive trees are regarded as saints themselves as well as manifestations of supernatural power in natural objects. Since the people in village T do not practically distinguish between saints as natural objects and saints as historical figures, they visit, pray, and offer sacrifices in the same manner to natural objects as they do to historical figures. Thus, pilgrimage to olive trees can be understood not as deviation of official saint veneration, but merged with veneration of ancestors and spirits, as one of the diversified forms of saint veneration owing to syncretic absorption of pre-Islamic religious influences.

The pilgrimage to the olive saint complexes represented their pre-Islamic element of tribal guardian deities, that played central axes of tribes living together in each valley. It was also confirmed that by visiting each other's sanctuary, inter-tribal ties centered upon olive-saint complexes were formed even between tribes living apart from each other. Ontologically speaking, pilgrimages to olive-saint complexes awaken a sense of the cosmogony and serve as occasions of healing and renewal in times of trouble. Because as seen in the narratives, the religious meanings of olive-saint complexes are experienced by pilgrims as several primitive elements out of Islam, such as a tree of life, mother, fertility, excess of power, and *mysterium tremendium*. Through the manifestation of the sacred on the olive-saint complexes, the world and self are newly defined by its overwhelming existence. This survey revealed that archaic factors from outside Islam still strongly affect the beliefs and practices of the people today. The veneration of olive-saint complexes represents an experience of the renewal of the world through contact with the sacred by means of the peculiar symbolism of the olive tree.

Chapter 4: Agro-food Culture of Olive and its Expression in the Festival of Village T

1. Introduction

In the previous chapters, I described the reverence of old olive trees and its syncretism with saint veneration in the olive farming village of South Tunisia. This chapter reviews the traditional agriculture and the dietary and medicinal culture of olives in South Tunisian villages and examines how the importance of olives as a dietary resource in different facets of living is expressed in the region's agricultural festival. Unlike North Tunisia, which is famous for its large-scale production for global olive oil market, South Tunisia experiences very limited olive cultivation both in quantity and in productivity because of low rainfall and challenges surrounding large-scale irrigation. Mountainous regions in the South have hardly produced olives using modern agricultural methods such as intensive agriculture compared with the northern and the central parts of the country, as investment-related production cannot be expected because of geographical and climate conditions. Because of this, South Tunisia continues to preserve its traditional olive farming methods. The olive oil produced here is mostly consumed domestically, so the traditional oil extraction method using animals endures to these days. In this society, where life and production processes are intertwined, olives and olive oil contain not only product value but also cultural value, so their indigenous food culture continues to be passed on to younger generations. Besides consuming olives and olive oil in their daily meals, South Tunisians also have their own methods of preservation and of utilizing residues from the production process. Many of these traditional dietary practices involving olives have been re-recognized as part of the Mediterranean diet, with their functional value proven through development of dietary supplement and drug discovery. On the other hand, some of olive dietary culture and folk remedies cannot obtain scientific evidence. Olives have been frequently used by local residents as folk medicine not only for their nutrition or medicinal function but also for their symbolism. Indeed, “the effectiveness of olives” for them seems to be rich in symbolic meaning. Many uses of olives can be interpreted as symbolic acts expected to bring about fertility and magical effects. The *mahrajan* festival, mentioned in the latter half of this chapter, is a government-created modern event that seeks to highlight the Amazigh tradition as a tourism resource. However, it emerged as an agricultural festival that involves praying for the fertility of olives and other crops and whose core ritual entails the donation and communal consumption of olives and bread, followed by a community parade with olive shoot decorations and traditional gun dancing, expressing the event's festive nature. It also shows every aspect of the life of olive farmers, such as olive farming, olive oil production, food culture, folk remedy, and symbolic function, all expressed in a condensed form.

2. Olive agriculture in South Tunisia

2.1 Traditional farming

It is known that the olive family has been used in Southern Europe since the discovery of fossil in Italy about 1 million years ago and of the olive pits and stones found from human settlements in the Paleolithic period (Di Giovacchino, 2013). *Olea chrysophylla*, an ancestor of the current olive (*Olea europaea*), is regarded to have originated from Asia and Africa (Boskou, 2006). On the other hand, the theory exists that the ancestor of the present olive may have been *Olea oleaster*, a wild olive from the Mediterranean (Loukas & Krimbas, 1983). In Tunisia, where olive cultivation was said to be brought by Phoenicians like in other countries west of the Mediterranean, olive is grown in a wide area, from the northern to the southern end. However, most of the olive production, providing the third largest export volume in the world, comes from the northern and the middle-eastern regions of the country. According to the National Office of Oil in Tunisia (ONH), the regional distribution of industrial olive mill facilities is as follows: 23% in the North, including Tunis, Manouba, Aryanah, Ben Arous, Bizerta, Beja, Jendouba, El Kef, Siliana, Zaghouan, and Nabeul; 26% in the Sahel region (middle east) other than Sfax, such as Sousse, Monastir, and Mahdia; 25% in Sfax (middle east); 18% in the central and the midwest regions, such as Kairouan, Kasserine, Gafsa, and Sidi Bouzid; and only 8% in the South, including Medenine, Gabes, and Tataouine.[26] This shows the deficient industrialization of olive production as well as the low olive farming productivity in the South.

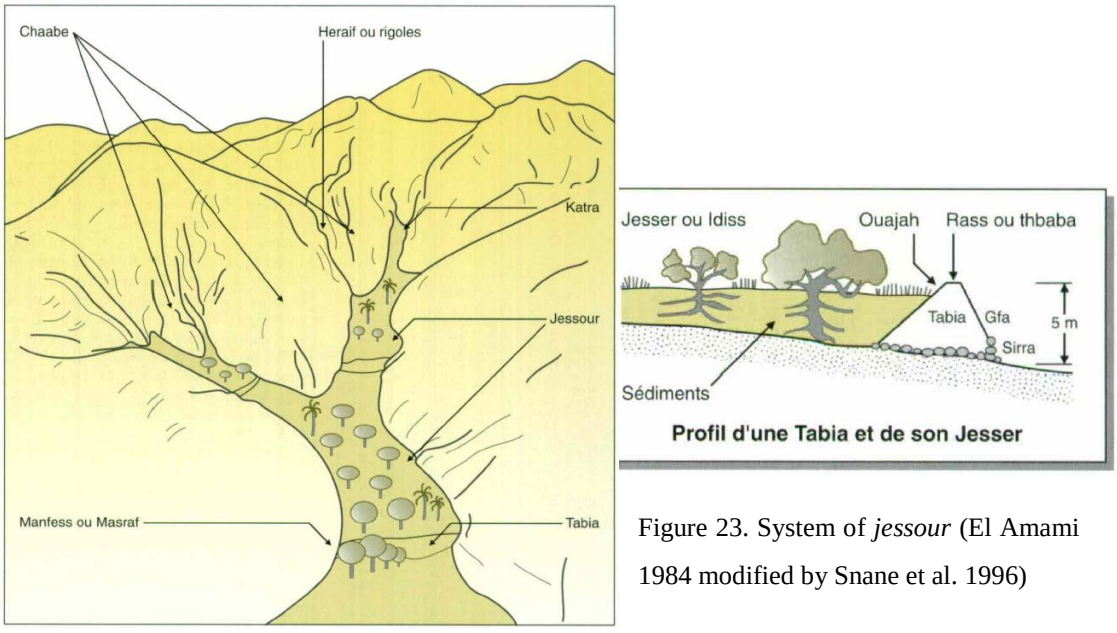

Figure 23. System of *jessour* (El Amami 1984 modified by Snane et al. 1996)

In Tunisia, precipitation in the North and in the South differs widely, reaching 1,500 mm per year in the mountain of Kroumirie in the Northwest and with many areas in the South experiencing less than 100 mm rainfalls per year. Across the whole country of 155,000 km^2, about 24% are non-arid areas, 35% dry areas, and 41% desert areas (Ben Mechlia et al., 2009, p. 1). Majority of the southern areas are deserts (Tarhouni, Ouled Belgacem, Neffati, & Chaieb, 2007; You et al., 2016).

[26] http://www.onh.com.tn/index.php/fr/2016-05-23-14-44-46/la-production (Access at November, 2018)

On the basis of IOC data, the average olive orchard density is approximately 100 to 150 trees per hectare with irrigation. For olive oil production, the density is 40 trees per hectare in orchards with abundant rainfall. For table olive production, orchard density varies between 200 trees per hectare with irrigation and 100 trees per hectare with rainfall.[27] In general, orchard density in the North is about 100 trees per hectare, 50 to 60 trees per hectare in the Central region, and 17 to 20 trees per hectare in the South.[28] Olive agriculture in the South has relatively low productivity, so most farmers keep livestock and live their lives as half-farmers and half-pastors.

The climate in South Tunisia, which consists of low rainfall and poor water resources from groundwater and rivers, sometimes brings random, unpredictable rainfall in the winter (Gasmi, Moussa, & Rejeb, 2014). Olive agriculture in the Demmer mountain chains, including the research site, has been supported by traditional technology to prevent runoffs and soil drainage by using mountain slopes (Gasmi et al., 2014; Abdelli, Ouessar, & Khatteli, 2012). A traditional water collection facility called a *jessour*, built between valleys, has three parts: a catchment section consisting of mountain slopes, a bank section to stop water (*tabia*), and a cultivation section consisting of sedimentary soil. The depth of accumulated soil in the cultivated area reaches about 5 meters, allowing fruit trees such as olives, dates, almonds, and figs to be cultivated, along with vegetables and cereals during rainy years. Downstream a *tabia*, water outlets such as a *menfess* and a *masraf* prevent embankment breakdown during heavy rains. The sedimentary soil is moistened during the rainy season, keeping the soil humid without killing the plants even in the dry summer (Ben Mechila et al., 2009; Gasmi et al., 2014; Snane & Mechergui, 1996).

Underground reservoirs called *majel* can be found in the vicinity of farmlands and residents. The *majel* in urban areas stores underground the water received by building roofs, but the *majel* in

Figure 24. Slope and sedimentation tank of *majel*

Figure 25. People drawing water from *majel*

[27] http://www.internationaloliveoil.org/store/view/120-olivae-124-ingles (Access at November, 2018)
[28] http://www.internationaloliveoil.org/documents/index/10-documentos/972-politicas-oleicolas/9 (Access at November, 2018)

mountainous areas consists of a water slope using a mountain surface such as a *jessour*, a water-catching gate, an underground stone tank to keep it, and an opening to bring it up. In front of the water gate, a sedimentation tank separates impurities, with only the clean water of the supernatant flowing to the underground tank. This system saves water during the rainy season to possibly cover one year's beverage, livestock, and agricultural water for a small number of people even in areas without groundwater. In the traditional olive groves planted in a *jessour*, water drawn from a *majel* is dumped to working animals such as donkeys, and partial irrigation is performed on trees whose water is insufficient during the summer when the drought is severe. These traditional cultivation methods remain dominant in villages M, T, Z, and B, where I conducted fieldwork, and most of the farmers here had small family units. Since the area where a *jessour* can be built is geographically limited, olive cultivation here is sparse. Small tribal groups traditionally make a *jessour* and cave dwellings to reside in the valleys of the desert area, cultivating olives and other crops and raising sheep and goats. The cultivars are commonly Chemlali, which is resistant to drought (Rekik et al., 2008), along with Zarrazi, Zalmati, and other local varieties.

Figure 26. Olive farm in a *jessour*

Figure 27. Troglodytic house

In many cases of olive cultivation in the South, farmers do not conduct modern harvesting methods involving picking immature fruits and suppressing oxidation; they still prefer traditional methods of harvest, from a sufficient ripening to when the fruit is black and dry. As explained by the farmers, since olive demand in the South tends to prefer a sweet taste and less bitterness, they believe the amount of oil increases as the olives mature. The harvest is undertaken by the entire family from December to February. Unlike the Northern and the Sahel regions, which have been developed though intensive olive cultivation, olives in the South are harvested by hand, and villagers are careful not to damage the trees. They believe that striking a branch with a stick to make the fruits drop is not a good method. The South has a tradition of keeping personal relations with olive trees, so they try not to “hurt” them as much as possible. They also consider olive trees as ancestral saints

or spirits, sing traditional songs with a metonymic expression to an olive tree and its owner, or identify an olive tree as a beautiful woman; this indicates that the people in the surveyed area do not treat olive trees as simple economic resources. Efficient farming practices have also been criticized for replacing low-producing old olive trees with new ones from which one can harvest quickly (Spanish species), such as in the Sahel region (Abu-Zahra, 1982, p. 187).

Meanwhile, the South had a custom of not immediately crushing the harvested fruits and instead keeping them in a cool dark place, pressing them only when necessary. In a time when sealed bottles were not available, it was common to store olives as fruits to prevent flavor deterioration. Even now, long-preserved olives are important for rituals such as wedding ceremonies; the longer olive fruits are preserved, the stronger their *baraka* (blessing). Although it is now being replaced by confectionery, there is still the custom of distributing long-preserved olive fruits to unmarried girls gathered at the last day of the wedding, the day after the first night in the village near the survey site. Olives used in wedding ceremonies must be *zaitoun yeabis* (am. *ghāmag*), that is, dried olives. A girl who eats the olive would be provided a *baraka*, which is said to promise the girl's eventual marriage. For a stronger *baraka*, some girls prepare olives stored for over 10 years for their own wedding.

From the above, it can be understood that olives in South Tunisia are cultivated in a form that is suitable for arid areas based on traditional knowledge and as a source of valuable income and at the same time treated with certain personalities and spirituality.

2.2 Traditional pressing

Since the discovery of seeds close to those of olives at the Paleolithic residence, humans have eaten the fruits of plants similar to olives in that era. However, it is said that oil extraction started at around 5000 to 4000 BC (Di Giovacchino, 2013) or during the Bronze Age (3600–3300 BC) in the downstream area of the Jordan Valley (Zohary & Spiege-Roy, 1975; Liphschitz et al., 1991). It is thought that at the earliest stage, olive fruits were crushed using stone and mortar, the paste at the bottom of the mortar was put in an open container, and the oil was separated after adding hot water, collected, and saved in a clay pot (Kapellakis, Tsagarakis, & Crowther, 2008). Since vase plates and clay pots in the Bronze Age were found in Crete (Di Giovacchino 2013) and stone tools for crushing olives were also discovered in Israel, Palestine, Cyprus, Syria, and others, the method to extract oil by crushing olives with mortar was thought to spread across the Mediterranean (Kapellakis et al., 2008). In the Mycenaean era (c. 1450 – c. 1150 BC), although the oil extraction method had been almost the same as that in the Bronze Age, people started using mats as filters (Isager & Skydsgaard, 1992). According to Galili, mats made of knitted grasses have been excavated with olive seeds in Israel. The crushed olive fruits were put on the mats, and placing a stone on them and squeezing them would bring out the olive juice containing the oil. Even now, the same form, a flat basket made of vegetable fiber, is used in the Mediterranean region (Galili, Stanley, Sharvit, & Weinstein-Evron,

1997). This mat is called *boxades* in Greece (Kapellakis et al., 2008), *eqel* in Hebrew (Galili et al., 1997), and *shwami* in Tunisia (Abu-Zahra, 1982).

As times passed, Phoenicians, Greeks, and Romans systematically spread olive cultivation to various parts of the Mediterranean. When olives became their main trade goods, supply volume increased commensurate with the demand. From the ruins discovered in Israel, it is known that during the Hellenistic period (323–30 BC), the crushing process had a major technological update. This refers to the method of attaching a large stone roller (cylindrical millstone) with a handle to a wide and shallow stone basin and turning it using human or animal strength (Tyree et al. 1996). In the Roman times, a more specialized crushing machine, the *trapetum*, was developed using two millstones that bulged into a lens shape. With the discovery of these rotary mills, it became possible to crush large amounts of olives at once (Tyree & Stefanoudaki, 1996; Kapellakis et al., 2008). Another big development at this time involved the oil extraction process. The wooden screw press discovered by the Greeks was improved by the Romans and spread throughout the Mediterranean. Even today, the traditional olive mills in the Mediterranean use rotary crushers with one or two rollers, disc filters with vegetable fiber, and a screw press and perform separation by precipitation to take out the oil floating in a juice surface (Di Giovacchino 2013, Galili et al., 1997, Tyree & Stefanoudaki , 1996; Kapellakis et al., 2008).

Figure 28. Piled olives sorted for each client in new village M

Modern oil extraction facilities began with Joseph Graham's invention of the hydraulic pressing system in 1795, but it was disseminated only after the end of World War II. Moreover, centrifugation, which was developed in the first half of the 20th century, made it possible to extract oil from suspension and emulsion, which had been difficult to do with precipitation instruments. This resulted in oil of higher yield and of more purified quality (Kapellakis et al., 2008). Among modern oil extraction facilities, centrifugation is more common than precipitation, with the process being automated; extracting impurities, washing, crushing, malaxation, centrifugation, and bottling are under a continuous process. However, a 2012 report by the International Olive Council showed that

Figure 29. Crushing fruits by single rotary mill

Figure 30. Piling up *shwami* on the press

only 657 mills, that is, 38.4% of the total 1,707 olive oil mills in Tunisia, had modern facilities with a continuous process. Among these, 613 mills used traditional facilities that have been unchanged since the Roman times.[29]

A number of traditional mills remain in the villages of my fieldwork site, with some of them still in operation. One of them, an olive mill (*ma'asla*) located in village J next to village T, conducted oil pressing for the summer festival (described later) although it is normally closed after harvest season. Animals are used to power traditional oil crushing. A shaft pillar is erected at the center of a flat stone mortar (am. *elfesh*) and then connected to a cylindrical stone roller (am. *ghāgad*). The roller and the mortar are attached by the shaft, and a donkey (am. *albghar*) is connected to its extended point. Once the donkey orbits the stone crusher (am. *andōr*), the roller also rotates the mortar to grind the olive fruits. It takes about 30 min to grind 30 kg of the fruits while adding water and olives to the mortar. Because harvesting in this area is performed after the olives have fully ripened, the olives will have already dried up and lost a lot of moisture right by harvest time. Since the olive fruits harvested in the previous season were used at the time of the survey, the ones preserved for half a year have further dried up. Therefore, in this process, more water than usual was added to the crushing mortar. Next, the crushed and pasty fruits were put into a disc filter

Figure 31. Twin rotary motor mill in new village M

Figure 32. Centrifugal separator in new village M

[29] http://www.internationaloliveoil.org/documents/viewfile/6777-tunisia (Access at November, 2018)

called *shwami*, which is knitted with date palm fiber. The edge of the *shwami* was folded back about 10 cm so that the paste does not spill out when it is pressed strongly. The mill owner heaped up piles of paste-containing *shwami* and ran the press machine (am. *sāli*). A total of 30 kg of fruits prepared for the festival was grinded and put into seven layers of *shwami*. Before the introduction of the hydraulic system, which the current oil press uses, they used a long beam as a lever and put large stones on its edge to press the fruits as a *ma'asla* in village T. Such facility is not used largely these days. The squeezed liquid was put in a built-in tank, and the surficial oil is taken out and separated from wastewater after a few hours. It was observed that in some South Tunisian villages, the rotary stone mill, the disk filter with knitted vegetable fiber, and the precipitation method that were popular in the Roman era are still used today.

The traditional olive oil mills have been mechanized step-by-step, introducing new facilities. In new village M, located at the foot of the mountain and closer to Gabes than village M, a motor belt is attached to the shaft of a traditional crusher, which allowed the fruits to be constantly crushed at a high speed. At this mill, oil pressing is also carried out by electric power instead of manually, and a simple centrifugal separator is also partly used. Because this mill can press a large quantity of oil at once, olive fruits are gathered in bags from nearby villages, piled, and waited for each turn when the olive harvest season comes. Even with the introduction of the belt motor, such semitraditional oil mills are greatly inferior to modernized equipment in continuous processing not only in the amount of extracted oil per day but also in quality control such as sanitation and antioxidation. However, farmers still prefer to use traditional mills rather than modern facilities, as it is believed that these mills can provide more oil yield at a higher quality than modern ones. It is also believed that olive oil from traditional mills possess a strong spiritual power for blessings or ceremonial cleansing rituals.

Figure 33. Crushing fruits by hand mill

The olive oil used in village T's summer festival should be made of olive fruits harvested the previous season and pressed 1 day before the festival. Using modern olive oil mills is prohibited, and motorized semitraditional mills like those in new village M is considered unsuitable either. Only olive oil obtained "traditionally" with animals can be used for festival rituals. In villages T or J, there

was once a custom to offer goats to each traditional mill in the summer, in the hopes of a plentiful rainfall and good harvest in the year, although it was abandoned about 40 years ago. Also, in village T, the oldest olive oil mill in the region is personified and worshiped as a female saint named Onml Ma'asla (Mother Mill). Even now, before the New Year's festival of the Amazigh calendar, the *hadem* of Onml Ma'asla dedicates *mulukhiya* to the site and prays for the success of the festival. In Morocco, cereals and olive oil are believed to easily obtain *baraka*; on the other hand, they are also possessed by spirits as sign of excessive fertility. The hand mill is one of the things that the *jinn* likes to possess (Westermarck, 1926a, p. 282).

As described above, various methods of oil extraction are used in South Tunisia, with older ones still being widely used. Furthermore, the religious value placed on traditional mills is also preserved as local customs conform to the life and mindset of olive farmers.

3. The dietary and medicinal culture of olive

3.1 Dietary olive culture in South Tunisia

Agriculture in South Tunisia, especially in the Demmer mountains, has not been very productive unlike that in the North or Sahel regions. According to Ben-Hamza, the average crop yield in village M from 1961 to 1971 was 100 kg barley per 1 ha sown, 60 kg wheat per 1 ha sown, and 17 kg olives per olive tree. This was lower than in other areas (1977, pp. 191-192), and neighboring villages with the same climatic and geographical conditions were expected to have an almost similar productivity. Because this production could not cover the basic needs of the area, a relatively large amount of basic commodities such as barley, wheat, and olive oil is brought in by the Ministry of Agriculture and sold to locals at nominal prices (Ben-Hamza, 1977, p. 192). Even the field survey confirmed that the villagers go to the market daily to buy bread, flour, pasta, olive oil, and vegetable oil. Still, homegrown barley, wheat, olives and olive oil, broad beans, lentils, chickpeas, and others are used as much as possible for everyday meals. Among these, olives and olive oil are highly versatile, and to say that olive oil is used in most meals is not an exaggeration. This section focuses on the use of olives and olive oils in daily and festival meals at the survey sites.

The basis of the meal is bread, especially unleavened bread (*khubz*) baked in house ovens (*tābūna*), along with olive oil and honey, which are produced in the villages. In addition, soups and

Figure 34. *Bsisa* and dried olives prepared for the pilgrimage in village M

Figure 35. Bread dipped in olive oil for a wedding in Sousse

sauces cooked with tomatoes, onions, other vegetables, beans, cereals, sometimes eggs and meats, are prepared for meals with table olives (pickles). Couscous, which is indispensable for pilgrimages, is a meal prepared by butchering cattle and served in feasts. The main ingredient of couscous is granular pasta made from roughly ground wheat flour with water. Dried couscous pasta is currently sold in packages, so many families do not make it by hand anymore. Also, couscous pasta is being replaced by other kinds of pasta such as macaroni and spaghetti. In pilgrimage areas, pilgrims dress the animals sacrificed for the saints and cook them as a sauce of couscous. Beef is said to be the best for sacrifice, but goats and sheep are mainly used; chickens are also used sometimes when pilgrims are short on finances. Olive oil, onions, garlics, tomatoes, harissa, tomato paste, and cumin powder are cooked with the fried meats, and several vegetables such as carrots, pumpkins, potatoes, or bell peppers are added to the sauce. Apart from pilgrimages, couscous is also often made without meat.

Although olive oil is essential for sauces and stewed dishes, it is also used to produce bread, and people also eat bread dipped in plenty of olive oil. Unleavened bread, olives, and olive oil are the basis of the local dietary culture. At Hammam Sousse in the Sahel region, the family of a bride distributed unleavened bread soaked in olive oil and olive pickles for wedding guests as the ceremony's feast. Even at a wedding in village T, the family of the groom brought olive oil and unleavened bread to the bride's family, and they ate them together in her house. However, when she is offered to eat the bread and oil, she should refuse until her mother-in-law takes them. Also, unleavened bread, olive oil, and *bsisa* were distributed to the wedding guests. The oil must be from old olive fruits, which must be newly pressed on the day of the wedding, or the day before in the case of village T. The use of olive in ceremonies is also evident in other places. In the village of the governorate of Monastir, the house of the mourner does not cook for several days of the funeral, and the neighboring families prepare a special meal of olive oil and bread. In the South, dried olives as well as olive pickles are often served in everyday meals. When olive harvest is unsatisfactory, there is a custom to keep the olives with a small amount of salt without pressing and eat them with bread instead of oil. Since olives in the South are ripe enough, a thick olive flavor and faint sweetness spreads in the mouth, and the bitter taste is not strong if the fruits are eaten directly. Dried olives are also eaten at pilgrimages. Pilgrims sometimes bring black dry olive fruits to a shrine. A pilgrim would grasp them without opening their eyes, wrap the fruits in their hand with a cloth without looking at how many pieces they have, and take them home. These uncounted olive fruits from a sanctuary are cherished as charms possessing good fortune.

Bsisa is also indispensable for ceremonies. It is made of bean flour and wheat flour with sugar, which used to be homemade but is now sold in the market. On the first night of a wedding in village T and other neighboring villages, before the couple's entry into a bed, a bride would pour olive oil into a bowl of *bsisa* that her mother-in-law holds. She would mix them by hand and feed her mother-in-law also by hand. In addition, *bsisa* is supposed to be indispensable for visiting saints.

Pilgrims bring it from home and add olive oil in a sanctuary, mix them well, and offer it by sprinkling (*tatīsh*) at mausoleums, coffins, and shrines as well as olive trees when it is an olive–saint complex site. In the sanctuary of Zaitoun Mahjoub, one of the olive–saint complexes in village T, olive oil taken from this sacred tree is poured in a tank and placed at its root so that pilgrims can add this olive oil to the *bsisa* that they brought and offer it to Zaitoun Mahjoub through *tatīsh*. Likewise, *bsisa* mixed with olive oil is dedicated to *jinn* and *jinnīya* when people feel their presence. *Bsisa* with olive oil offered to saints and spirits is eaten together by all the pilgrims. Olive–saint complexes such as that of Zaitoun Mahjoub emphasize the meaning of returning the olive oil to the giver (olive tree) in the process of communal dining with saints, spirits, and people.

Figure 36. *Khadem* offering *mulukhiya* to Onml Ma'asla

In addition, *mulukhiya*, whose green color is considered to bring good fortune in Islam, is also used in pilgrimages. In Tozeur, the *mulukhiya* stew is said to be a dish suitable for the new year of the Islamic calendar, as it signifies prosperity and harvest (Takaki, 2000, p. 330). At my fieldwork site, *mulukhiya* is eaten in the New Year of the Amazigh calendar (agricultural calendar). Olive oil is also indispensable for cooking *mulukhiya* soup in village T, whose base is chicken soup. At the village's new year's festival, called *Ehtifel*, a few people including the *khadem* of this land go to the sanctuary of Onml Ma'asla, an ancient olive oil mill that had been closed for a long time, wishing for fertility and the success of the festival. Onml Ma'asla is a cave dug under a riverbank terrace of a *wadi*, about 4 or 5 km. away from the central village. The *ma'asla* (mill) inside the cave is considered to be the oldest in this area, and people say it dates back to the Roman era. It was used until the middle of the 20th century, and the villagers say this *ma'asla* gives a greater yield than others. The *khadem* makes *Mulukhiya* soup in his house and then pours it into the gate of Onml Ma'asla. He puts a bowl of *mulukhiya* soup on the stone in the opposite bank of the cave, goes to a distant place, and returns to the stone. This is repeated four times. He picks up a pebble from the stone's place in the last return and puts it in the other place. According to the *khadem*, offering *mulukhiya* is for *baraka* (blessing), and only his family can prepare the soup. The same soup is eaten by his family the same day.

There are other essential dishes at *Ehtifel*. Currently at this festival, traditional cuisines are

cooked by each family and are brought to other villagers and guests. Many traditional dishes such as couscous, *mlaoui*, *rufisa*, and so on are lined up on the venue, with *berkukush* and *'aṣīdah* being the most fundamental foods for *Ehtifel*. Similar to couscous, *berkukush* is made of pasta, but larger. The recipe is almost same as couscous; in village T, it is added with chickpeas, lentils, broad beans, dried octopus, carrots, and green peppers while olive oil, *harrisa*, tomato paste, garlic, and onions are used. *'Aṣīdah*, a pudding made from wheat flour, is widely eaten in North Africa and the Middle East. There are two ways of eating this dish: with olive oil and honey (or sugar) and with a salty hot *harissa* sauce. The former had been preferred in the past for its sweetness, but in recent years, the latter, called *'aṣīdah kraia*, has become popular. The currently sweet *'aṣīdah* is favored for breakfast, and the salty *'aṣīdah* is served at dinner. Traditional wedding ceremonies in villages T and Z practice the ritual of collecting wood (am. *felleg*, ar. *hattāba*) by young men, mainly the groom (Louis & Sironval, 1972). In the ritual, men make *'aṣīdah* in the desert and eat it together. Also, in the rain ritual called Onmok Tambo (described later), the earth's shift from dry to fertile is the subject of a

Figure 37. Dishes for *Ehtifel* in village Z

sexual metaphor involving *'aṣīdah* and olive oil.

As shown above, olives and olive oil are used in various dishes as a basic element of the local diet to enrich the nutritional intake of the villagers in the South Tunisian fieldwork sites. Traditional meals that include olives and olive oil are also made, served, and eaten together in ceremonial occasions, festivals, and pilgrimages. In such cases, not only olives but also dishes made with olive oil such as *mulukhiya*, *ʻaṣīdah*, and *bsisa* are given religious meanings and function as prayer mediators to good harvest, fertility, and blessings.

3.2 Evidence of folk medicinal usage of olive

In this section, I explain the application of olives in folk remedies observed in this fieldwork. Besides using olives for nutrition, olive farmers in Tunisia, who cultivate, store, and press olive oil, have also inherited various medicinal remedies using their most familiar plant. Many of these remedies have scientific evidence of anti-inflammatory and antibacterial effects, among others.

One traditional remedy is the application of crushed olive fruits to one's skin when bitten by a mosquito, as well as putting a small amount of warm olive oil into the ear in the case of pain or discharge. Among the important components of these remedies are the proven anti-inflammatory

Efficacy	**Remedy**	**Activity**	**Reference**
to cure mosquito bites	to apply crushed fresh fruits to the affected area	Anti-inflammatory	Fitó et al. 2007, Fitó et al. 2005, Tuck et al. 2002
to cure ear problems	to put warm oil into the ears	Anti-inflammatory	Fitó et al. 2007, Fitó et al. 2005, Tuck et al. 2002
to cleanse teeth, gums, stomach	to rinse the mouth with a 15-minute-boiled decoction of leaves or drink it	Antimicrobial	Lee and Lee, 2010
to cure liver problems	to eat solid waste or kernel	Protecting liver function	Alirezaei et al. 2012b
to cure poor circulation, sensitivity to cold	to massage the body with warm oil	Promotion of circulation	Agarwal et al. 2000
to soothe the fretfulness of a baby	to massage the top of the head with oil	Neuroprotection	Daccache et al. 2011
to cure stomach or internal organ problems	to eat solid waste	Neuroprotection	Daccache et al. 2011
constipation	to drink oil	Laxative action	Abut et al. 2009
to strengthen the body, to beautify the body	to massage the whole body and specific parts every day and wrap the body	Promotion of circulation	Agarwal et al. 2000

Table 8. Traditional remedies with olives and their respective evidence

properties of a-linolenic acid (Fitó et al., 2007) and oleocanthal (Fitó et al., 2005; Tuck & Hayball, 2002) in olives.

Another remedy to cleanse the teeth, gums, and stomach would involve rinsing with or drinking a decoction of olive leaves boiled for 15 min. This seems to be connected to the antioxidative and antimicrobial activity of phenols in olive leaves (Lee & Lee, 2010).

It is said that a patient with liver problems should eat an olive pomace, which is pressed and dried and is usually fed to livestock, especially its olive kernels. Olive kernels have been reported to contain more antioxidant phenols than olive oil (Theoharides, 2007). The oleuropein extracted from

Figure 38. Dried olive pomace with white kernels

olive leaves (Alirezaei et al., 2012b) also protects liver function.

Massaging the skin using warm olive oil is also believed to alleviate poor blood circulation and coldness in women. Besides the effect of oil massage on the skin surface (Agarwal et al., 2000), olive leaves have also been found to have the antiaggregant agents oleuropein and (+)-cycloolivil (Zbidi et al., 2009). Olive oil is also used to massage babies' heads as a remedy for fretfulness or nervousness. The hydroxytyrosol, oleuropein, and oleuropein aglycone in olives have been proven to have neuroprotective effects (Daccache et al., 2011). Eating olive pomace would also result in the same neuroprotective remedies for stomach pain or other internal organ problems. In addition, oleuropein's effectiveness in preventing gastric ulcer has also been investigated (Alirezaei et al., 2012a).

The traditional remedy of drinking olive oil to cure constipation is also practiced especially by children. A clinical study has confirmed the laxative action of an olive oil regimen (Abut et al., 2009). As a similar aid for smooth child delivery, a pregnant woman drinks olive oil mixed with honey before breakfast, but there seems to be no studies showing the direct role of olives in parturition.

Finally, it is said that to strengthen an infant's body, an effective method would be to massage him or her with olive oil and wrap him or her with cloth every day until the seventh day after birth; if the intended effect is to enlarge the eyes or straighten the feet, one should massage the appropriate body part. Such a remedy may be related to the oil massage's promotion of blood circulation

(Agarwal et al., 2000), but its influence on the growth of a specific part of the body could not be found in any study searched.

Some of these traditional remedies have had their effects proven by scientific studies whereas others have not. In most occasions where traditional medicinal treatments are practiced, the materials used for these treatments are given cultural or rather religious meanings by the practitioners, patients, and communities. The next section discusses the traditional remedies whose effects have not been proven scientifically.

3.3 Symbolism and folk medicinal usages of olive

Traditional remedies often hold symbolic (magical) aspects not only in the case of South Tunisia but also generally. This is because traditional medical treatment is not practiced by separately applying the single effect of a remedy to a disease; rather, it is based on a symbolic understanding of the world, which includes the environment, olives, herbs, and the climate, shared among a community of practitioners and patients (Lévi-Strauss, 1963). Below are cases in which olives or olive oil is used with the expectation of some kind of effect, but such "effectiveness" seems to have been derived from the symbolic relation between olives and fertility.

On the island of Djerba, I discovered that a woman is instructed to eat *'aṣīdah* with olive oil every morning if she wants a male baby. If she wants a girl, she should eat unleavened bread mixed with olive oil and sugar, called *kessert hammēth*, at every meal. Also, there are several olive oil remedies pertaining to pregnancy or giving birth; if a pregnant woman drinks olive oil, it would give her a beautiful baby (village T) or allow for an easy delivery (Monastir). The mixture of olive oil and honey is fed to a baby each morning so that he or she would start to talk sooner (village BK). A bride is also fed olive oil by her mother-in-law at the first night of her wedding, hoping for her to experience an easy first intercourse (village M).

As seen in Chapter 1, olives provide images of the richness of land and the prosperity of descendants in Tunisia. In particular, olive oil appears to possess a symbolic function to aid reproduction, birth, and fertility possibly with the function as a lubricant. However, the basis for olive and olive oil symbolism is that both are experienced as religious paradigms, or what Eliade calls *arche*. In some cases, for example, olive is used simply as an amulet without imitating or following its *arche* (religious experience). Such meaning can be reduced to a profitable "effectiveness" that is separate from a religious understanding of the world, that is, a "degradation of symbol" (Eliade, 1949/1996, 440-443). However, even if religious meaning is lost from the symbol, it can be repetitively recovered through a paradigmatic experience such as pilgrimage to a sacred olive tree or remembrance of the divine origin of olives in rituals.

Such paradigmatic experience is directly described by the production and use of a special refined olive oil called *ndūgh*, which is thought to be a panacea for all kinds of diseases and an

aphrodisiac especially for enhancing the vigor and productivity of males in various aspects. In the field survey, several claims on the power of *ndūgh* included the following: "it is drunk by young men because it strengthens his sexual ability" (village M), "I had drunk it before I met my girlfriend. It worked very well" (village TJ), or "because the effect is very significant, it is use only as aphrodisiac agent" (Zarzis). Some have also claimed that to improve her husband's vitality, a wife would produce *ndūgh* at home and not use it on anything but her husband (Sousse). In addition, the same effect can be achieved not only through drinking but also through massage. In village T, a wife would massage her husband's body and sex organ for 3 days using a mixture of a small amount of henna in *ndūgh* and let him drink it. This is believed to heal his erectile dysfunction.

Ndūgh must be produced not by machine but by stone mill. The olives used for it should be well ripened, with a black or dark color. The fruits are ground with a stone mill and placed in a large open container when it becomes pasty. After a while, a slight oil layer forms on the surface of the paste, and the oil scooped up by small tea glasses is called *ndūgh*. Because the process does not involve adding water and pressure, it can be made only in very small amounts and is thus too precious to be sold in markets. It is made at home only for families or at traditional olive mills for special friends or guests, and it is useful as a remedy for rheumatism, arthritis, enteritis, and skin disease and as an aphrodisiac, among others. The *ndūgh* production process seems immensely old fashioned, almost the same extraction method as that in the Bronze Age. Although Greeks and Romans brought Tunisia new technologies and new olive oil extraction methods are introduced, the ancient manufacturing process of *ndūgh* has not changed. It is evidently a "paradigmatic" way of making primitive olive oil different from ordinary olive oil, and it can be said that the mythical structure of olive oil is revealed in its production. The process of making *ndūgh* is the same as when people learned how to take olive oil (mythical time), and such a paradigm is represented whenever people make *ndūgh*.

According to Eliade, the ceremonial recitation of the cosmic creation myth in archaic religions plays a particularly important role in treatment. The person "for whom it is recited is magically projected in *illo tempore*, into the 'beginning of the World'; he becomes contemporary with the cosmogony" by reciting the initial event in which gods created the world. At the bottom of the curative rituals, the underlying conception is as follows: "life cannot be repaired, it can only be recreated through symbolic repetition of the cosmogony". It is exactly because of the power of primitive creation that *ndūgh* can cure all kinds of diseases and revive the male procreative power, that is, the power to be a source of life. Although the myth of the Amazigh had been lost, with only trace elements of folktales in the survey sites, olive oil is bestowed a divine origin through the paradigmatic way of making *ndūgh* and its representation each time it is produced. This makes it possible for *ndūgh* "to begin life once again", which is "a symbolic rebirth" just like the ceremonial recitation of creation myths (1957/1959, p. 82).

The Vedas, the ancient Indian scriptures, contain descriptions of the herb of life, or the herb of immortality, which has healing powers and enhances the vitality of men so they can provide many children (Yajur Veda iv. 2.6, Rg Veda x. 97, vii. 34.23, x.64.8). In ancient Mesopotamia, grapes were considered herbs that bring immortal life (Langdon, 1914, p. 43). In Sumeria, the legendary king Etana asked the sun god for the herb of life, whereby his wife got the heir (Dalley, 1989/2000, pp. 189-202). Also, in China, the peach of Queen Mother of the West was believed to be a sovereign remedy that provides immortal life and rejuvenation (Ō, 2000). King Solomon, searching for the herb of immortality, went out into the wilderness and met an old man holding it (Wünsche, 1905, pp. 15-16). In these stories, the plants' fertility and immortality powers seem to be based on cosmogonical power, which is derived from going back to when the world began. The belief in olives found in Tunisia seems to be common to that of plants found throughout the world. Namely, the olive is believed as a life-giving plant that is the source of life and represents the beginning of time. When considering olives' traditional medicinal effects, one would note that it is used for "rejuvenation" and as an "aphrodisiac," which chemicals could not replace and which cannot be limited to anti-inflammatory, antibacterial, neuroprotective, and other properties. In fact, such symbolic and religious functions are the core of life for those who use traditional medicine, with other medicinal effects being derivatives of the ability to renew life. With regard to the central symbolic function of olives as a fertility agent, its ability to renew life is expressed in the agricultural festival. The following section discusses this festival, where various aspects of olive culture including symbolism, agriculture, oil extraction, and dietary culture are condensed.

4. Olive culture in the agricultural festival

Popular festivals in the Islamic world include *Eid al-Fitr* (celebration of the end of Ramadan), *Eid al-Adha* (festival of sacrifice), *Mawlid* (birthday celebration of the prophet Muhammad), and the memorial days of certain saints (Hoffman, 2002). On the other hand, in Tunisia, where people's lives have depended mainly on agriculture since before the Punic era, the practice of agricultural festivals including rainmaking rituals represent their interest on land fertility and rainfall. Because of the modernization of agriculture and the diversification of their lives, different agricultural festivals previously seen in almost all villages (Louis, 1975) are disappearing in many places. Nowadays, a new type of festival called *mahrajan*, a cultural event or local festival, has been implemented by the governmental policy for religion and touristic promotion since the 1980s. This new festival in village T strongly combines olive cultivation, locality restoration, and the veneration of saints, which had been suppressed through the modernization process (Takaki, 2000, p. 350). Some elements of old local agricultural festivals are present in this festival. Held in summer, *mahrajan* shows multiple aspects of olive agriculture and olive oil processing as well as their dietary culture, tourism, and symbolism Next section, following the arrangement, preparation, and process of *mahrajan* clarifies

their social significance and religious functions with reference to general idea of festival.

4.1 Approach to the festival

To observe *mahrajan* in village T on July 2015, fieldworks were undertaken in December 2014, July 2015 and June 2016. The author conducted interviews with the locals of the village and administrative officers of the delegation, as well as observations of several rituals and the festival itself, performed by local villagers. A survey of statistical data and historical documents was conducted to supplement the results of the fieldwork. Interviewees were selected from both Amazigh and Arab families, men and women from their twenties to their eighties. Festivals cerebrating saints are very popular in North Africa and they are held annually in mausoleums or related mosques (Westermarck, 1926a, p. 175). To counter Islamic fundamentalism and bring back the cultural diversity, the Tunisian government has undertaken policies to restore and utilize these festivals as cultural and touristic resources since the 1980s (Takaki, 2000, p. 9, p. 350; Venema, 1990, p. 99, p. 118). *Mahrajan* that is held not only in Tunisia but also in many Arab countries is popularly celebrated with a parade, music, dance, and fantasia (performance of horse riders) in Tunisia, and most of the elements are also common to many similar festivals around the world. A festival, in general, is an important social function and an inclusive self-expression of society. It is a ritualistic "consummation" of social wealth (Bataille, 1949/1967), and can be an occasion to activate symbolic meanings that are traditionally inherited (Marquet, Spera, Kuramochi, & Russ, 1996, p. 264). Symbols as ethics, aesthetics, historical views, and the sense of life being shared by community members are observed in festivals through dances, parades, music, riots, floats or palanquins, dramas, and games. Through the process of festivals, the mythical meaning of community, which is normally hidden, can be displayed. Role reversals, dramatized replays of myth, and explanations of the community as a sacred cosmos are undertaken. Through myth revival in the actual world and by elevating communications between god and man, as well as between man and man, a community and its members can be renewed (Sonoda, 1973).

In Europe, for example, the festivals of maypole, which symbolize the coming of spring, are well-known. A tree (maypole), as the axis of the world, is set in an open space of a community and the renewal of the world is enacted (Marquet at al., 1996, pp. 89-150). Similarly in Japan, it is an archetypal pattern that divine palanquins (*mikoshi*) or divine characters enacted by children or young community members parade through neighborhoods, replaying the myth of creation. In these festivals, parades, music, dances, and games are popularly practiced and the participants enjoy an extraordinary and bacchanalian festival atmosphere (Kurabayashi, 1979; Sonoda, 1990). These elements appear universal, being found in monotheistic, pantheistic, and even atheistic cultures.

By tradition, certain festivals in big cities are easily incorporated with tourism owing to the nature of a city where a community is expanding. There are always performers and audiences at such

festivals. Thus, a festival has certain characteristics that are inseparable from tourism and exhibition. It is important to note that, even if the *mahrajan* is organized for tourism or for governmental policy, this does not weaken the significance of the festival itself, but it may hide "the festive sense." Kerenyi defines "the festive quality" as being "a thing on its own, never to be confused with anything else. It can be confidently distinguished from all other feelings and is itself an absolute distinguishing mark" (1962, p. 53). His definition refers not only to religious or cultural festivals, but also to all creative attitudes of human beings, "in distinction from the attitude of every day" (1962, p. 15). This part of the chapter discusses the transformed festival in village T integrating traditional agricultural rituals based on the cultivation and dietary culture of olive through the modernization, and how the festive quality is maintained in this *mahrajan*.

4.2 Traditional agricultural rituals in South Tunisia

Festivals were prohibited in the villages during the French occupation, and this style of the *mahrajan* has only been held since 1993 in village T. Elders say that festivals in the village were not organized by the government; most of them were already lost at the fieldwork sites, but various agricultural festivals have been held in each village until the middle of the 20th century. It seems that these festivals were closely linked to local agriculture, especially olive cultivation and olive oil extraction, the main sources of livelihood in these villages.

4.2.1 *Jumal Āshūrā*

The festival of *Āshūrā*, held on the 10th day of the first month (*Muharram*) of the Islamic calendar, was originally an event of the Shia sect for mourning the martyrdom of Husain ibn Ali, a grandson of the prophet Muhammad. Thus, it was not considered a public event by the Sunni sect, and it has been linked with indigenous traditional customs and rituals in each region (Takaki, 2000, p. 311). In the surveyed area of village T, this festival was called the "Camel of *Āshūrā*," an opportunity to express gratefulness for harvest and to provide encounters between young men and women. On festival day, a doll of a camel was made with olive branches, with a cloth for its body. Two boys played a camel, holding its mask and the body, and visited houses in the village. In the village square, called *Braka*, camel fighting was exhibited. Unmarried girls could watch it, but to avoid exposure to the eyes of others, they were covered entirely by two large cloths. One piece hanged under their eyes to their ankles, and the other covered the upper part, from their faces to their backs. Unmarried men marched in front of them, and if a girl found a man of her choice, she spread out the cloth to show her face to the boy to make him stop and talk. However, this contact between girls and boys was monitored by "black men," whose ancestors were from sub-Saharan Africa and who dwelled in the village managing instruments and events. If they found a girl and a boy talking, they should be kept out. In the village of Amazigh, there had been few opportunities for unmarried

men and women to meet each other except in occasions such as weddings and festivals, until the first half of the 20th century. In Jumal āsūrā, *'aṣīdah* with olive oil was made in each house, and the men who gathered at the festival ate it. The men would have then discuss whose *'aṣīdah* was the most delicious.

Also, in several sections of village M, there remains the custom of unmarried girls visiting the saints of the mountains on the day of *Āshūrā* without any men or old women, and in village Z, the people dedicate *bukhōr* to the nearest olive tree to each house.

4.2.2 *Ehtifēl*

Ehtifēl, also called *El Heffel* or *Ten Taffel* in Amazigh, is a new year's festival of the solar calendar, *sena al-ajamīya*, that is said to be derived from the Julian calendar.[30] It is usually held around the 14th and 15th of January of the Gregorian calendar. It used to be a celebration held by each clan rather than one event throughout the village. In large clans, all the female members gathered in *Braka* and enjoyed watching horse riders and bands from Douz or Gabes. Before the French occupation, family members also visited their olive groves during *Ehtifēl* on a season of good harvest. They sacrificed sheep to their olive tree and prepared couscous under it, enjoying music and *hadra* all night. Many families still perform wedding ceremonies or circumcisions during this season. *Ehtifēl* in those days seemed to be rather a series of individual cerebrations and ceremonies. The peculiarity of this festival is the people's consumption of *mulukhiya*, the reason being that its green color is considered lucky in Islam. People eat *mulukhiya* with hope for the new year with a lot of greenly harvest. As indicated in earlier sections, on the day or the day before *Ehtifēl*, the villagers offer *mulukhiya* soup to the cave of the old olive oil mill called Onml Ma'asla with wishes for good harvest and the success of that year's *Ehtifēl*. Since 2015, the *Ehtifēl* in village T was renewed by the festival committee as an extended and all-encompassing festival, which was different from the traditional cerebrations of each family. The village explores the form of a new festival that incorporates traditions and its presentation to the outside world, such as the procession of children, the exhibition of traditional cuisine or costumes, and lunch with visitors. Meanwhile, the villagers strongly criticize elements of the program, such as the aim to promote tourism rather than the villagers' participation, which is actually not as substantial as the number of visitors.

[30] Tunisia currently uses three calendars, mainly Western (Gregorian) calendar, Islamic (*Hijrī*) calendar, and an agricultural calendar called *Ajami* (non-Arabic) or *Amazigh* calendar. Until the Western calendar was introduced, the official events were based on the Islamic calendar which is the lunar calendar. However, since the year of the Islamic calendar is about 354 days, the lunar months do not coincide with the seasons. Therefore, in Tunisia, the solar calendar of Julius, which is said to have been brought in Roman times and called *Ajami* calendar, has been normally used as an agricultural calendar (X, 1910, p. 3; Doutte, 1908/1984, pp. 541-542; Takaki, 2000, p. 159). Ajami calendar is about 13 to 15 days later than the Gregory calendar. Therefore, January 1st in *Ajami* calendar corresponds to around January 13th to 15th in the Gregorian calendar.

4.2.3 *Onmok Tambo*

Another festival, called Onmok Tambo, is held in autumn or winter, before or in the middle of olive harvest. This is a variation of the rainmaking ritual widely seen in North African countries under various names, such as Onmok Tambu in Sahel, Onmok Tango in the southwest, Tagunza in Morocco, or Aghenja in Algeria (Westermarck, 1913, p. 117; Louis, 1975, p. 323; Hilton-Simpson, 1915, p. 241; Abu-Zahra, 1988, p. 522). According to Westremarck, the names are derived from the Amazigh term for "ladle," which is related to fluids. In Sidi Ameur in the Sahel region, it is performed by young girls and single women such as widows and divorcées, whose lack of sexual activity is symbolically linked with the dry earth (Abu-Zahra, 1988, p. 522). Onmok Tambo is a doll normally made of a large ladle and the handle of a loom crossing each other and decorated with clothes like a bride. The women go around fields and houses with children and the doll, singing the song of Onmok Tambo and *zagharīt*. The holder of the doll receives wheat and barley and then wraps them in the doll's costume. When women see the procession, they sprinkle water on the doll (Louis, 1975, pp. 324-325).

In village Z, this festival still takes place in the middle of December. The doll is made of olive boards with a face of a woman dressed with a turban and necklaces praying for plentiful rainfall and olive abundance. The material used to be from date palm trees, but now it is from olives and other trees.

Song in village Z	Song in Sidi Ameur	Translation by Abu-Zahra
Onmek Tambou chahloula	Ummak Tambu ya-shahlula	Mother Tambu is beautifully dressed
Nchallah trauah mabloula	Inshalla trawwah mablula	May God bring her back wet
Omek Tambou bskraibha Nchallah rabi maykhaibha	Ummak Tambu be-skhayebha Talbet rabbi ma-yekhayebha	Mother Tambu with the necklace which adorns her
Omek Tambou chahloula	Ummak Tambu ya-n 'ssa	Asked God not to disappoint her
Nchallah trauah mabloula	Klat el-'aysh bel-lh 'ssa	Mother Tambu, O women,
u zairiâa That(Thaktat) Toub	Ummak Tambu ya-rijjala	Ate porridge with soup
hann âlima ya matloub	Klat el-'ayshfi el-fawwala	Mother Tambu, O men,
		Ate porridge in the kitchen.

Table 9. Comparison of songs of Onmok Tambo (Ummak Tambu) collected by the author and Abu-Zahra (1988, p. 523).The song in ville. Z was dictated by H (20s female) from Z.

In village T, where this festival is already lost, the celebration used to be held especially in the winter when there is insufficient rain. The doll (Onmok Tambo was interpreted as an elderly woman in this village) was made with olive branches and is brought to houses with unmarried girls and children. When one of them knocked on the door of a house, someone from the family poured water on the earth. The next morning, the women served the men *'aṣīdah* without olive oil. The men were forced to eat *'aṣīdah* without olive oil, which is coarse and difficult to eat, but if a man hesitated to

do this, the women would splash water on him. *Aṣīdah* without olive oil, a food that has a bad texture and is less slippery and unlubricated, seems to be associated with a sexually inactive old woman and the dry earth as pointed out by Abu-Zahra (1988, pp. 522-524). The act of putting water on Onmok Tambo or on the earth is a "sympathetic" ceremonial act (Frazer, 1920) of giving water to

Figure 39. Doll of Onmok Tambo in village Z

a dried up, infertile old woman (earth) and reviving her fecundity. The song of Onmok Tambo in village Z seems partially identical with the one in Sidi Ameur.

4.3 New festival: *Mahrajan* in village T

Because Amazigh village T is in a mountainous area, many men go out to cities seeking employment. As described in Chapter 3, this village has a population of about 900 people, but during the summer and winter holidays, people working in other areas return home all at once. It is also said that the population of the village in these seasons will double because the second- and third-generation villagers who grew up in urban areas return to the village, along with the migrant generation, to see relatives. This corn-shaped village is divided into eight sections (sg. *zīah*, pl. *zihēd*). Its central and highest elevation is called Alaa Sirbred, where the main mosque is located. Five sections—Tazet, Minaji, Mzana, Lmhaia, and Ghiren—encircle Alaa Sirbred. Narrow lanes, through which automobiles can barely pass each other, spread and connect the main sections. Tounin and Slom are new sections located on the village's west and east ends, respectively. The central section, the highest place, is where the oldest Amazigh families have stayed, and other Amazigh families built their houses in the five main sections around it. In short, this village is constructed step-by-step from top to bottom by newcomers each time. Most of the non-Amazigh villagers stay in Tounin or Slom. The village has one elementary school, one clinic, one post office, two grocery stores, three cafés, and two auberges for tourists. Tourists used to regularly visit the village because of a national route that passes through it, and from there, tourists could see an "authentic" Amazigh village. However, since the 2011 revolution, very few tourists have visited or even passed through this village.

4.3.1 Preparation for the festival

The governorate of Gabes promotes and supports a large festival (*mahrajan kbir*) involving five Amazigh villages. It is further touristic events as well as in other *mahrajan*s organized by the government. A *mahrajan* held only by the villagers of T is small, local, and simple. Although a *mahrajan* organized by the governorate includes traditional or local features, such as the exhibition of traditional ceremonies or traditional processing of agricultural products, these are more shows than traditional customs, occurring without the local community's participation and initiative. Owing to the government's strong initiative and support for the organization of such *mahrajan kbir*s to promote tourism and cultural activities in the modern sense, which can be valuable resources, it is difficult to observe the original nature of a festival. According to Turner's "communitas,"[31] it is necessary to understand that festival participation should be a total exchange that essentially involves roles and responsibilities for the operation of the cosmos and community. The roles here differ from those of mundane life. This sense of reality, the transition from the ordinary to the extraordinary, can be called "the festive quality" (Kerenyi, 1962, pp. 49-70). At a cultural event, such as a music or film festival, based on tourism and commercialism, participants are requested to convey their consumption or preferences, instead of their roles and responsibilities, which are eventually extensions of their mundane lives. Its religious or festive characters, if any, are very limited. In contrast, the *mahrajan* solely organized by the village can realize the function of a festival and it holds the festive quality because instead of extra festival contents it has a ritual and festivity core. The differences between these two *mahrajan*s in their sizes, purposes, and contents appears so big that it can cause confusion, and many Tunisian villages or towns are facing cultural succession and transformation of traditions between these two types.

Figure 40. Program of *Mahrajan kbir* organized by the governorate of Gabes with workshops, cinema, animation, theatrical performances, and rap musician concerts

The facilitator of the *mahrajan* of village T, who is responsible for negotiations between the Ministry of Culture and Heritage Preservation of the governorate of Gabes and village T, commented

[31] Turner 1969

that the central government has not provided a budget for this festival although they have patronized *mahrajan kbir*. Thus, it has become quite difficult to organize a *mahrajan* every year, and indeed certain villages have skipped this event for some years due to shortage of funds. In 2015, village T was the only one to hold a *mahrajan* in its area, and this was after a gap of two years.

Two years previously, the festival was also held after *Eid al-Fitr*, as it was in 2015. The facilitator frequently goes to meet the section officers, and his responsibility is to obtain the necessary permissions to organize their local festival on the expected date (26 July), after *Eid al-Fitr*. When I arrived at the village on July 14, 2015, the section director had not yet authorized the *mahrajan*. The necessity of a long negotiation between the government and the village seems to be due to the history between the Amazigh people and the central government of "Arabs." The villagers complained about governmental control, and the governorate staff complained about the Amazigh villagers' perversity and resistance. The *mahrajan* of the village is dependent on the delicate balance of power between the central government and the cultural independence of the Amazigh.

For the *mahrajan* in village T, olive oil, newly pressed one or two day before in a *ma'asla*, a traditional stone mill, is necessary. As a *ma'asla* was unavailable in the village, the facilitator was required to find another *ma'asla* from a neighboring village. There are several old *ma'asla* in the village, but they were not in use that time, especially it was in summer. Dried olive fruits picked in the previous season were prepared. From a traditional perspective, the older the olive fruit, the better it is, and therefore the more valuable and powerful. It is used as a medicine and as a charm with blessings (*baraka*). The facilitator's tasks seem to be wide-ranging. He arranges the *ma'asla*, old olive fruits, an animal to move the stone, musicians, a palanquin, and a camel, and selects the roles of the *mahrajan* and the house to which the palanquin on the camel is headed.

About 30 kg of olive fruits from the previous harvest are prepared, dark and dried. After 30 minutes of grinding and adding water, the fruits become paste; the paste is then placed inside a flat container called *shwami* and pressed into oil. This is an approximately one-day process and the villagers must obtain the oil before the *mahrajan*. "The mother of groom" cocked forty big loafs of bread (*alwajib*) and put the newly pressed olive oil (*oudhi*) on it in the morning of the day of *mahrajan*. The number of loafs of bread should be a multiple of ten.

Figure 41. Departure of the palanquin

4.3.2 Process of the festival

The festival begins around 6 pm in the village square. People start gathering at the office of the agricultural NGO, located along the national highway, and it is regarded as "the groom's house." The office is chosen because the facilitator of the festival belongs to this NGO, which works for both agricultural development and Amazigh cultural identity. Four black musicians, some of whom live in the village, play music with three drums and an oboe (*zurna*) in front of the office gate. A small charcoal stove (*kanoun*) with incense is placed there to consecrate the place, and a palanquin (*jahfa*), set on the back of a camel, goes to bring the festival's "bride" from her home to "the groom's house." The palanquin is covered with a red cloth to prevent anyone from seeing the bride's face. The cloth is decorated with a fish amulet, which prevents bad things, a national flag, and an olive branch, which is regarded as "indispensable for this *mahrajan*."[32]

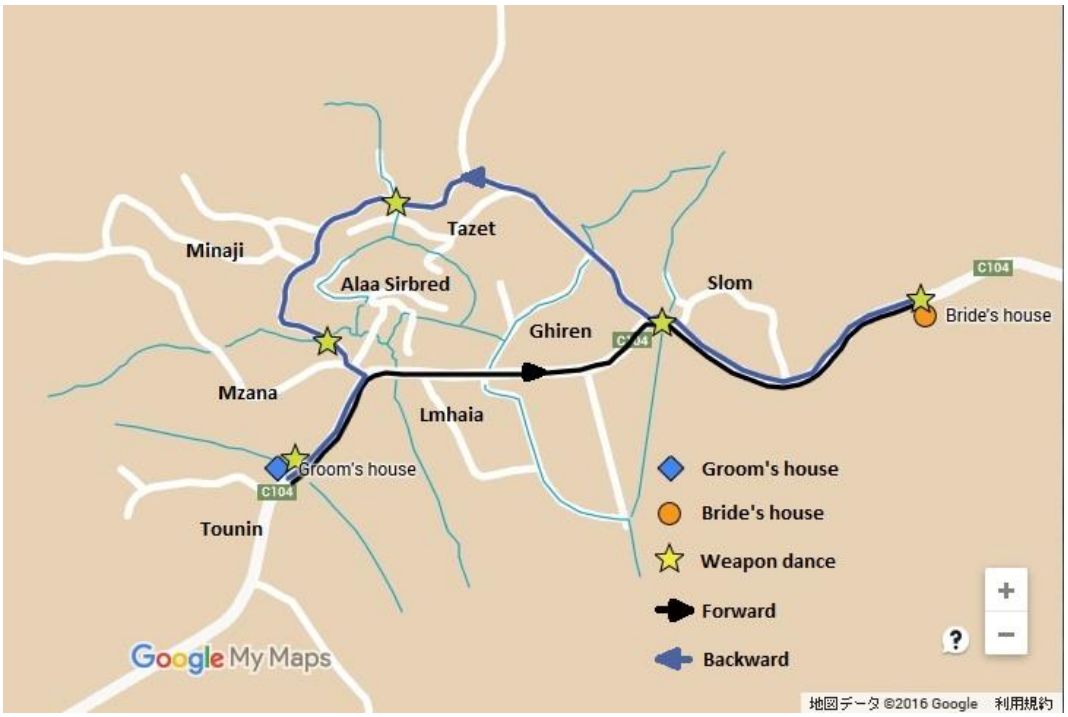

Figure 42. Map of the eight sections of the central village T and the parade route

Each of four or five young male members wraps himself up in a white woolen cloth (*holi*),[33] which covers him from head to toe. They also carry double-barreled rifles without shells. Although firing a salute for the *mahrajan* is popular, the government currently prohibits this practice. Female members prepare themselves in the office. With the advent of them wearing traditional garments, the procession starts with music. Two unmarried girls from "bride's side" carry baskets (*tbag*) on their

[32] It is based on the interview with the facilitator.
[33] These young men are also called *holi*.

heads filled with bread and girls want to do that because it is believed to bring good marriage for them soon. These represent gifts from the groom's family to the bride's, as is done in a wedding procession.

The parade proceeds from "the groom's house" to "the bride's house" located at the edge of the village and is spearheaded by the musicians, the palanquin, the male members, and the other villagers (male and children), followed by female members singing a traditional song to promote a good olive harvest. They stop in front of the bride's house and the women enter the house with great *zagharit* (ululation). The bread is served inside the house, while the men wait outside with the musicians. "The bride" cannot touch the bread until her mother in law starts to eat it first. Then, it is eaten by all the family members and her friends. Eating the bread is also thought to be good luck for the next marriage.

"The bride" whose face is covered by a thin red fabric appears from the inside of the house with a black woman called *tēbet hennāna* (agent of henna).[34] The young man of the house ("bother of the bride") wearing a *holi*, points his rifle (*magroun*) at the bride. She is covered by his cloth, along with other women of the family, and they perform a ritual to convince the bride with themgiving strong *zagharit* inside the cloth. When the confirmation is complete, "the brother" takes the *holi* back. He moves outside, pointing the gun at "the bride", the two barrels of which she fills with her fingers. According to the villagers' explanation, this symbolizes the deflowering that occurs on the first night; if the bride is remarrying, this gesture is not made. They move outside and she sits in the palanquin, which is covered and sewed up tightly by the camel handler. During her boarding and alighting, "the bride", *tēbet hennāna*, other women, and the handler are all covered by a white cloth.

From "the bride's house", many more women join the parade, and the black mistress carries a *kanoun* for *bkhor*. After the camel with the palanquin stands up, the male members set off fireworks instead of firing a salute. Men perform a weapon dance called *meiyāza* with the music in front of the bride's house. A set of men, each with a rifle on his shoulder or head; they aim and point it at each other to compete in their skill with it. They go around taking small steps and face each other. After five sets of the weapon dance, the procession proceeds back to "the groom's house." This procession goes through seven sections (sg. *zīah*, pl. *zihēd*) around the village's central section, Alaa Sirbred, located at the highest point of the village. The weapon dances are performed again at five locations during the course to the destination. At each location, the dance is performed by men wearing white cloths and some adventitious players, and the people clap their hands in tune with the music and enjoy watching the dance. Of these, four locations are at intersections of the section borders, including "the groom's house," and another one, "the bride's house," is at the border between the village and its exterior. According to the explanation by some villagers, this is done to involve all the

[34] It is explained that her black color prevents an evil eye because the color of Berber woman is pale and fragile to that.

sections in the procession, but these locations also indicate the very core nature of this *mahrajan* as a festival.

When they arrive at "the groom's house," the sun has set and it is dusk. The camel handler cuts the thread with which the cover of the palanquin is stitched and extends the *holi* to hide "the bride," who gets off the palanquin. Well prepared under the cloth, she appears again, performing the gesture of filling the gun of "the man of the bride's family" with her fingers, surrounded by the noise of *zagharit*. The black woman carries a bag called *koffa* with water, almonds, perfume, sweets, bread and olive oil for "the bride". According to Louis and Sironval (1972, p. 97), the contents of that in a traditional wedding are nuts, spices, fragrant wood, mastic gum (*luban*), perfumes, sugar cubes, candies, silver jewelry, a comb, and a mirror. These were a trousseau and it does not contain bread and olive oil originally. She is welcomed by "the mother of the groom" who washes her right foot before entering the gate and the gun is taken by "the man of the groom's side" inside the house. Only women and the man with the gun can enter the house where a groom and his father are to wait for their arrival in normal marriage. After they lead her inside the house and close the door, the gate is opened for the male members in the procession. They again perform a weapon dance in the yard of the house with the women's *zagharit* and the music. Soon, many men join the dance, which transforms into the type of dance that can be observed daily. Children and women join occasionally; the music stops after one hour of dancing, and the *mahrajan* is over. The alternation of the men's weapon dance with the usual dance by men and women represents the festival's climax and finale as the participants indulge in the promiscuous atmosphere.

4.3.3 Symbolisms in *mahrajan*

4.3.3.4 Agricultural rituals and elements in wedding rituals

The *mahrajan* in village T is based on the process of second day of the traditional wedding ceremony, in which the groom's side goes to the bride's to bring her to their place, called the "day of the *jahfa* (palanquin)" (Louis & Sironval, 1972, p. 97, p. 102). Although most of the wedding rituals are omitted, it is important to see the original form of the wedding that the *mahrajan* imitates. Traditional weddings are not separated from the rhythm of agricultural life. Guests were once gifted bread (*alwajib*), olive oil, and traditional sweets of *bsisa* during this ceremony; they have been replaced by couscous today. It was necessary that the olive oil be prepared from old olive fruits and be newly pressed before wedding ceremony, the ritual of pressing olive oil for *mahrajan* follow that procedure today. During the wedding ceremony, at the bride's house, after an old woman has verified the bride's virginity, a relative of the bride places olive oil in his/her mouth and spits it on bride's head six times. This is based on the symbolic power of olive oil to purify and encourage the first conjugal relationship to be "as smooth as olive oil" (Louis & Sironval, 1972, p. 100). During the ceremony, the groom carries a scepter (*aamout*) of olive wood shaped like the male sexual organ to

show his strength and manliness. Quranic phrases, the date, or the groom's name are carved on it, and it is decorated with pompoms and tassels. He must keep it throughout the ceremony and even take it to the bedroom. The bride's ceremonial garment also displays many symbols. Not only in the village but the south of Tunisia, the flowering olive tree (*larousa*) is importantly connected to her; a bride is called *larousa*, just as the tree's specific condition. She is called a *larousa* for one year after her wedding, symbolizing a beautiful olive tree that promises to bring many fruits.

Figure 43. Ritual scepter

There are many of such cases of agricultural symbolism in the wedding ceremony which indicates universal connection between agriculture and marriage. These metaphors and symbolic gestures are practiced with agricultural sensitivities, based on the similarities between the birth of plants and that of human beings. Weddings are a rare occasion for young men and women to interact with each other in village T, where chastity is of great importance, and such meetings can encourage them to form couples and eventually lead to the next wedding. Traditionally, such free communication is only restricted to such occasions (Louis & Sironval, 1972, p. 99). The function of encouraging the forming of couples appears to have been succeeded by the *mahrajan*; it is now an occasion for the younger generation, who have grown up in cities and returned to their relatives owing to with their parents' homecoming.

If they choose a traditional wedding to display to tourists as their cultural resource for the *mahrajan*, the reason behind this choice is worth considering. The imitation of a traditional wedding in accordance with agricultural rituals is based on (1) the symbolism of agricultural fertility and the wedding described above and (2) the importance of weddings in the community. The festival is a dramatic replay of the wedding ceremony as the archetype of the beginning of the Cosmos. The wedding they perform is not that of certain individuals but of myth, namely, a *hierogamos* (symbolic replay of a marriage between a god and a goddess). Ontologically speaking, a mythical wedding precedes the actual wedding ceremony.

4.3.3.4 Parade and dance as dramaturgy

Relying on Leach's concepts of the festival's temporal structure,[35] Sonoda notes that a festival has two aspects: ritual as formal communication and festivity as dramatic communication (Sonoda, 1973, p. 687, 1990, pp. 59-61). In the ritual, they provide bread with olive oil to the bride's family and eat together inside the house. The closed process of the ritual is strict and should be carefully controlled by the mistress of the ceremony. The rules are very importance and represent the social order. In contrast, the inseparable pair of dance and music are thought to be dramatic communication; they are particular qualities "in all the principal celebrations in the cycle of human life and of the seasons—initiation, puberty, marriage, death; planting and sowing, harvesting and vintage, and at the turn of the year" (James, 1961, p. 280).

Furthermore, transporting the bride from her house to a new place is the main part of the festival and can be called festivity, although it also includes a ritualistic aspect such as the importance of procedures and boundaries. Generally in a festival, the transition itself is the motif. Selecting the bride's house to be from one edge of the village also represents the festival's peripheral aspect. The state of undergoing a wedding itself is a transitional existence, especially for a bride in a community of virilocal marriage. At the same time, performing the weapon dance signifies the transitional nature of the *mahrajan*. Indeed, the dance at each section's border is explained by the villagers as an invitation to all the sections to participate in the *mahrajan*, and it surely operates to develop unity within the community.

On the other hand, as Eliade states, "the cosmos is conceived as a living unity that is born, develops, and dies," since "life is the absolute reality, and, as such, it is sacred" for *homo religiosus* (persons with religious sensitivity) (Eliade, 1957/1959, p. 73, 1954/1974, p. 61). Any creature, even vegetation, is never the perfectly closed existence. It should take external material into its body, and discharge something from itself to outside such as diet and excretion, inhalation and exhalation, sexual intercourse and birth. The structure of coming in and going out of its entity is the essential for creatures. Otherwise, it cannot maintain its existence as an individual as well as a species. So, performing the dance at the borders, rather than the centers of the sections, also indicates a transition between the sections. Its function is to symbolically activate the coming-in and going-out at the borders as a living thing, and to link these sections organically.[36] It is the recreation of a live cosmos through the transition from including parts of a community to the entire community, and by coming and going as one organic section. In "liminality" where the creation of new meaning is possible by

[35] Leach represented four time phases for the festival: (A) the rite of sacralization or separation (formality), (B) the marginal state (role reversal), (C) the rite of desacralization or aggregation (masquerade), and (D) the normal secular life (Leach 1961: 124-136). Sonoda focuses on (A) and (C) as reciprocate attitudes enabling the transcendental symbolism of the festival while referring to the traditional Shintoism festival style (Sonoda 1990: 60).

[36] This idea is based on the Japanese folkloric concept of "visiting god" (raihō-shin) that comes regularly to a community, brings fertility, and goes back. It is widely seen in various places in the world (Nagano 1973: 19-20).

the reversal of positions or deprivation (Turner, 1969, p. 102), the parade and dance are performed to reconcile the sections and to create the community as a whole.

5. Conclusion

The olive cultivation and its dietary culture in South Tunisia remain traditional methods still widely due to the undeveloped conditions unlike that in the northern part and Sahel region. On the cultivation methods adapted to the harsh environment and oil extraction methods commensurate with the production volume, personal relationships between olive and the people based on symbolic world understanding was found as well as the effectiveness. On the traditional foodways using olive, while folk remedies with olive are applied in many ways whose medical functions such as anti-inflammatory action and antibacterial action of olive are proved, it was found that in the context of the usage of traditional remedies, some remedies were regarded to possess symbolic effects such as "a medicine to cure all" or aphrodisiacs. As same as the festival foods or pilgrimage foods, the medicinal olive oil with symbolic effect is repeatedly reproduced as a paradigmatic food. By eating and using it, the mythical original meal, the original method to produce olive oil, or the original human power is revealed.

Such a paradigm of human existence is expressed in a condensed form of the whole life of the village over olive even in the new festival of *Mahrajan* which was produced in the transformation of the tradition by modernization. In particular, the young shoot of olive attached to the palanquin that walked around the village symbolically revitalized the village by the regenerative power of olive shoot to grow, and in the co-eating of newly pressed olive oil and bread, the harvest of that year (olive and bread) could make the people brand-new and bring them a power for prosperity. Although the *mahrajan* in the village has been implemented for regional touristic promotion, the *mahrajan* revitalizes the community and identify the meaning of their lives by dramatically replaying a wedding, recreating the world through parades and dancing, emphasizing the borders where something or somebody comes in or goes out. From the perspective of festive quality, the annual *mahrajan* brings a sense of fertility through their imitative actions of oil pressing and marriage presenting the renewal of the village as a new cosmos.

Chapter 5: Potential Value-added Products with the Cultural and Religious Meaning of Olive

1. Introduction

In the previous chapters, I have discussed how olives are symbolized and expressed culturally and religiously in the communities whose main livelihood is agriculture of olive in South Tunisia. The indigenous belief system in olive tree is syncretized with Islamic saint veneration. Olive trees are venerated as a saint, ancestor, and spirit, under the symbolisms of a source of life, fertility, and a source of the power beyond this world. It was confirmed that the meaning of olive was experienced through the rites of passage, the pilgrimages, and the agricultural festivals, thereby the symbols of olive including dietary and medicinal usages of olive could be given the reality. The peculiar meaning of olive of the Amazigh villages in South Tunisia, which has never been known so far, is assumed to be accepted as a new value, a new "story" of olive oil by the global market.

Olive oil, that had historically been produced and consumed in the limited regions of the Mediterranean basin and the Middle East, has started to be consumed in global market since last few decades. According to International Olive Council (IOC), the olive oil consumption of 2017 in the countries where olive oil had been produced traditionally increased by 34% compared with that of 1991, and that in the countries where olive oil had not been produced traditionally increased by 233% in historically not producing countries such as Asia. With the global expansion of its consumption, the cultivating fields of olive are expanding from the Mediterranean and the Middle Eastern countries to South America, North America, and Asia. The production of olive oil in the world increased from 2,787,500 ton in 1991 to 4,984,500 ton in 2017, and Australia, China, and USA keep strong significance of the increase of their production. For example, since Chinese government promotes the planting of olive trees, the amount of the olive trees is approaching to the number of the olive trees in one of the biggest promoting regions in Spain (Gonzalez-Lamas, 2018). It shows the possibility of the predominance of the Chinese olive oil in the market in future. Due to the expansion of the producing areas, olive oil products will be much more diversified. To keep the reputation and take advantage to the new competitors, olive oil in the Mediterranean region is expected to be specified and differentiated more than ever. What kind of characteristics can make the effective differentiation possible other than well-known international quality standards such as low acidity or polyphenol content?

As seen in the previous chapters, olive and olive oil have been strongly connected to religions in the Mediterranean region. Olive oil is considered as a holy oil in the biblical traditions of Judaism, Christianity, and Islam, used for rituals and meals. Also in several local cultures in the region, olive and olive oil had been treated as sacred with their mythologies, rituals and folktales (Wirgin, 1962; Polymerou-Kamilakis, 2006; Kambanis, 2006). Within the cultural context, some olive oil products using its religious and cultural images are produced in the Mediterranean region. But it remains a

question that the religious cultural images of olive or olive oil in the Mediterranean region can be shared in the global food market. The aim of this chapter is to examine the religious cultural meanings of olive that are found through the previous chapters can be positive attributes to differentiate a product in a global market. I conducted an internet survey to Japanese consumers to explore the impact of religious cultural attributes of olive oil on the consumers' willingness to pay with the choice experiment. The impact of the information of religious cultural images of olive on the consumers' choice is investigated, based on the mythological background of olive in the Mediterranean region discussed in Chapter 1, the veneration of sacred olive trees in South Tunisian villages in Chapter 2 and 3, and the local dietary and medicinal applications of olive in Chapter 4.

2. Literature review

The influence of public good attributes of food products on consumers' willingness to pay are widely subjected, and the studies on this topic vary in wide range of approaches. Tully and Winer (2014) categorized those socially responsible products according to the beneficiaries of the program into humans, animals, and environment, and surveyed their impact on consumers' willingness to pay. The social responsible programs whose beneficiary is human beings were studied from, for example, the view point of the support for small farmers (Bond, Thilmany, & Bond, 2008; Hu, Batte, Woods, & Ernst, 2011), or of food safety from the several risks such as pesticide or new antibiotic-resistant bacteria (Florax, Travisi, & Nijkamp, 2005; Ortega, Wang, Wu, & Olynk, 2011). In the program whose beneficiary is animals, there are studies on the impact of products' procedures on wild animals (Baird & Quastel, 2011), and the consideration of wellbeing of farm animals (Lagerkvist & Hess, 2010; Clark, Stewart, Panzone, Kyriazakis, & Frewer, 2017). There are many studies on the programs beneficial to environment, such as organic products (Moser, Raffaeli, & Thilmany-McFadden, 2011; Torquati, Vigano, & Taglioni, 2016; Lombardi, Caracciolo, Cembalo, Lerro, & Lombardi, 2015) or products of low impact on environment (Loureiro, McClusley, & Mittelhammer, 2002; Lusk, Nilsson, & Foster, 2007) during the process of production and distribution.

Meanwhile, food products with public good attributes are also studied on labeling of area of origin and its geographical indications (Mabiso, Sterns, House, & Wysocki, 2005; Loureiro & Umberger, 2005; Onozaka & Mcfadden, 2011; Lusk & Anderson, 2004). The labeling of country of origin is often used by consumers to select domestic food products. Laureiro and Umberger (2003) resulted that consumers' preference for domestic products was due to their higher quality while Lusk and Anderson (2004) concluded it is because of the consumers' protectionism or ethnocentrism. The effect of labeling of country of origin on consumers' WTP out of domestic context is also studied as well as studies on the geographical indication (Troiano, Marangon, Tempesta, & Vecchiato, 2016; Menapace, Colson, Grebitus, & Facendola, 2011). Mtimet, Ujiie, Kashiwagi, Zaibet, and Nagaki,

(2011) had studied the effect of information of country of origin of olive oil on consumers' WTP in Japanese market. Because the information about quality is usually more expensive and difficult to obtain by consumers than the information about price (Nelson, 1970), information of area of origin as well as quality or brand name of the product on label, can be important standard on consumers' choice. Even in the online market where competition of price and function is very severe due to its openness, a brand name is still important with products with differentiated image and irreducibly complex attributes (Degeratu, Rangaswamy, & Wu, 2000). Troiano et al. (2016) indicates the influence of preservation of landscape which seems to reflect the terroir of the place on consumers' WTP based on the result that all respondents of his survey judge the contribution of the wine producers in maintaining the traditional landscape positively.

Study to measure the impact of consumers' cultural background on consumer behavior is not a minor approach and has been implemented with several industries such as food, clothing, service, etc. Grunert (1997) determined that the consumers' motivation to buy beef in four EU countries is highlighted by social factors as tradition, atmosphere, social life and status. Shavitt and Cho (2015), referring to the biaxial cultural theory of Triandis and his colleague (Triandis, 1995; Triandis, & Gelfand, 1998) as horizontal or vertical culture, and individualism or collectivism, analyzed the consumer behavior of each cultural region from the brand strategies of their markets. As well, Moschis and Ong (2011) examined how the consistency of consumer brand and store preferences is influenced by consumers' religiosity. On the other hand, cultural background of the product can be the added value for the market. Tempesta et al. (2010) pointed out the importance of cultural heritage elements in the background of a product noting that a visual image of landscape of wine production can influence the quality perception. However, little studies concerned the effect of cultural and religious values added to market goods, especially on food with public good attribute. This paper works on the impact of information of the Mediterranean olive oil which contains religious and cultural values on consumers' WTP in Japanese market.

3. Model

The conceptual foundation of a choice experiment (CE) arises from the theory of Lancaster (1966, 1971), which argues utility is derived from the properties of goods possess (bundle of attributes). The major idea of CEs is based on the random utility theory, assuming individual is utility maximizers and selects alternative from a given set of alternatives to maximize his/her utility. Following Louviere, Hensher, and Swait (2000) and Hensher, Rose, and Greene (2005), random utility theory states that the overall utility U_i of individual i cannot be observed, but it can be expressed as the sum of a deterministic (observable) component V_i and a random error (unobservable) component ε_i. Thus, individual i's utility of alternative j is expressed as $U_{ij} = V_{ij} + \varepsilon_{ij}$. Individual i chooses alternative j rather than alternative k if $U_{ij} > U_{ik}$. In probabilistic terms, the

equation is given as follows:

$$P_{ij} = Pr(U_{ij} > U_{ik}) = Pr(V_{ij} + \varepsilon_{ij} > V_{ik} + \varepsilon_{ik}), j \neq k, j \in C_i, \quad (1)$$

where C_i is the choice set for respondent i. The random error component ε_i is assumed identically and independently distributed, and follow type I extreme values distribution (McFadden, 1974). This condition leads the conditional logit model. Equation (1) indicates that individual consumers choose an alternative from number of choices to maximize their utility.

The conditional probability of alternative j for individual i in choice set of C_i is expressed as follows:

$$P_{ij} = \frac{exp^{V_{ij}}}{\sum_{k=1}^{k} exp^{V_{ik}}}, j \neq k. \quad (2)$$

In this study, I consider the linear additive form of the utility function V_{ij} for the main effects model:

$$V_i = \beta_j + \sum_{h=1}^{H} \beta_{hj} x_{hij}, \quad (3)$$

where x_{hij} is the hth attribute value for alternative j for consumer i, β_{hj} represents coefficients to be estimated, and α_j represents the intercept of alternative j. In this study, the choice set is constant and includes four alternatives.

The conditional logit model is used on the following linear random utility function. Since the estimation of this survey demonstrates the acceptable result of goodness of fit measure, the conditional logit model is adapted in the present study.

$$V_i = \sum_j \beta_{ASC_j} \cdot ASC_j + \sum_j \beta_{CT} \cdot Country_j + \sum_j \beta_{TS} \cdot Taste_j + \sum_j \beta_{PG} \cdot Pilgrim_j + \sum_j \beta_{PG} \cdot Pilgrim_j + e_i, \quad (4)$$

where V_j denotes a random utility from ith respondent's choice; e_i is the error term with a Gumbel distribution. The alternative specific constant, ASC_i takes 1 if the respondent chooses type j olive oil, and zero otherwise. The attribute of olive oil, including $Country_j$, $Taste_j$, $Pilgrim_j$ and $Price_j$ constitute deterministic utility. $Country_j$ is set of dummy variables of olive oil j that represents country of origin. $Taste_j$ s is a set of dummy variables of tastes olive oil j. $Pilgrim_i$ takes 1 if olive oil j is produced in the land of pilgrimage, and zero otherwise. $Price_j$ variations are 400, 800, 1200, 1600, 2000, 2400 JPY per 250 ml bottle of olive oil. $\beta_{ASCj}, \beta_{CTi}, \beta_{TSi}$, β_{TGi} and β_{PGi} are parameters to

be estimated.

The equation (4) can derive the Willingness to Pay, WTP, by taking marginal rate of substitution between the attribute and price for each product. Following Train (2009), marginal WTP, MWTP of attribute j can be given as the negative value of ratio of parameters between attribute j and price (β_{PRj}):

$$MWTP_{jn} = -\frac{\beta_n}{\beta_{PRj}}, \quad (5)$$

where *n* equals to *CT*, *TS*, *PG*, which represents attribute of country of origin, taste, product of the land of pilgrimage, respectively.

4. Data collection and methodology

To investigate the impact of cultural and religious information on Japanese olive oil consumers, a survey was conducted by Intage Inc. which provides online and offline research service in Japan and Asian countries. Total monitors of 2,478 females from twenties to sixties in their ages who lived in Tokyo and its neighboring prefectures as Saitama, Chiba, and Kanagawa at that time, were randomly selected among its nearly 8,920,000 survey monitors. With the population of the four prefectures from twenties to sixties being 100%, the statistics of population by age on the Basic Resident Registration System showed that they have 16.8% of twenties, 20.5% of thirties, 25.1% of forties, 18.4% of fifties, and 19.2% of sixties in the area. It reached the almost same age composition as the respondents of our survey; 16.3% of twenties, 17.5% of thirties, 25.7% of forties, 20.3% of fifties, and 20.2% of sixties. So this survey offered adequate sampling reflecting the age distribution in these four areas. According to the Information and Communication Statistics Database constructed by Japanese Ministry of Internal Affairs and Communications, internet users in Japan in 2016 were about 100,840 thousands (83.5%) of the Japanese population. Through web-questionnaire conducted from 21st to 26th February, 2018, total samples of 526 validly responded to the questionnaire and the efficiency percentage was 21.2%.

The questionnaire can be divided into four parts. The first part included questions about olive oil consumption and purchase frequencies, quantities consumed annually, place of production, labeling preference, and important criteria for choosing olive oil. The second part includes questions about respondents' ideas about the cultural and religious image of olive oil and their knowledge on it. The third part includes the choice experiment questions and cards, and final part respondents' socio-demographic characteristics. In the first question, the questionnaire asked them whether they use olive oil. Three response options were given: (1) Yes; (2) No, but I may use olive oil in the future; (3) No, and I may not use olive oil in the future; generating the respective response frequencies: 413; 50 and 63. Only respondents who chose responses (1), (413) participated to the choice experiment.

Attributes	Levels
Country of origin	Spain
	Italy
	Tunisia
Taste	Sweet
	Bitter
	Pungent
Religious attribute	Produced in a place of pilgrimage
	Not produced in a place of pilgrimage
Price (250 ml bottle)	400 Yen
	800 Yen
	1200 Yen
	1600 Yen
	2000 Yen
	2400 Yen

Table 10. Selected olive oil attributes and their corresponding levels

Regarding the choice experiment, the selection of the appropriate attributes and their corresponding levels was based on a previous study conducted by Mtimet et al. (2011) on Japanese olive oil consumers; and on the objectives of our research. So, the choice experiments cards were defined by four attributes: country of origin, taste, religious attribute, and price of 250 ml olive oil bottle. The religious attribute means whether the olive oil was produced in a place of pilgrimage. The selected attributes and their corresponding levels are shown in Table 10.

In the choice experiment, respondents were asked to make a choice among four alternatives: three alternatives related to three different 250ml bottles of olive oil and a fourth consistent alternative of no choice (do not buy). Each olive oil bottle was characterized by a combination of different levels of the four attributes introduced above. A sample choice experiment set is illustrated in Table 11.

In the experiment, respondents were divided into two groups; Group 1 was informed about attributes details and labels, particularly with regard to the cultural and religious background of the olive usage in Tunisia and Mediterranean region, and Group 2 was not informed. The information provided to Group 1 is shown in Table 12.

"Which 250 ml olive oil bottle would you like to buy?

Please check with(X) below the selected alternatives."

Bottle A	Bottle B	Bottle C	None
Spain Sweet Produced in a place of pilgrimage 400 Yen	Italy Bitter Not produced in a place of pilgrimage 1200 Yen	Tunisia Pungent Not produced in a place of pilgrimage 2400 Yen	I will not purchase any bottle
☐	☐	☑	☐

Table 11. A choice experiment sample card

Information	Explanation for respondents of Group 2
A	Olive has been widely cultivated in Mediterranean area since antiquity. Its frequent appearance in the ancient myths shows its importance.
B	In Tunisia which locates in the South coast of the Mediterranean, olive has supported people's lives due to its durability to dryness. It has been used for traditional foods as well as traditional medicines.
C	In Tunisia, olive trees are considered as blessed trees, and some of the old olive trees are venerated by people. As well, olive oil is considered to possess power to bring them happiness.

Table 12. Explanation of the cultural and religious attributes of olive

5. Empirical results

The questionnaire contained the socioeconomic information of the respondents, namely age, marital status, level of income and education, number of children in household. Selected socio-economic characteristics of the respondents are shown in Table 13. The average sample age is about 45 years old. Nearly 1/3 of them are married and the average number of children is about 0.6. The medium household income was between 5 million and 6 million per year. More than 36.3% of the respondents graduated university.

Results of the choice experiment are summarized in Table 14. Three multinomial logit models of Group 1, Group 2 and Total were estimated. They are corresponded respectively to Group 1 of informed respondents, Group 2 of non-informed, and that of totally estimated (Group 1 and 2).

According to the results of the main effect model, olive oil made in Tunisia and Spain have negative significance compared to olive oil made in Italy, on their preference of country of origin. That indicates higher consumer preferences for Italian olive oil followed by Tunisian and then

Spanish. While in Group 2, attribute coefficient level does not indicate such tendency but in Group 1 with information, attribute coefficient level shows the significance. It means the religious cultural information of olive oil has positive impact on consumers' choice of Italian olive oil.

Concerning the tastes, bitter and pungent taste of olive oil shows negative signs indicating they are less chosen than that of sweet taste. Especially the significance of coefficient level of pungent taste is much clearly lower than bitter taste. Group 1 does not have significance of the level of bitter taste although Group 2 and Total have, so possibly the information mitigates the consumers' avoidance of bitterness.

The pilgrimage coefficient in Group 1 and Total shows positive significance indicating consumers' preference of olive oil made in the land of pilgrimage to that of not. Comparing the results of Group 1 and 2, the religious cultural information has a clear impact on the consumers' choice of pilgrimage olive oil.

To understand the difference between the results obtained from the three groups, WTP for each attributes of olive oil have been estimated as in Table 15. The results showed that, consumers are willing to pay a premium of pilgrimage olive oil between 141 and 946 JPY. Group 1 gives 6.7 times premium to pilgrimage olive oil compared to Group 2 does, indicating a strong effect of the religious cultural information on consumers' choice of the attribute of pilgrimage. The price coefficient in total indicates negative significance but the value of the coefficient is very low, indicating the effect of the level of price is marginal on consumers' selection of olive oil. It follows the results of Mtimet et al. (2011), whose price attribute parameters were very low as from -0.0015892 to -0.0019257.

To appreciate the responders' characteristic at their choice of attributes, the cross effects on the educational level, the age, the number of children, and the income level have been estimated as in Table 14. The results indicate the linkage between educational level and the choice of the pilgrimage attribute in Group 2 and Total. If the level of education becomes high, the consumers tend to rate the attribute of pilgrimage high. On the contrary of the results of the main effect model, the informed group does not have significance although non-informed group has high significance. Thus it is confirmed that the information gives negative impact on the choice at this characteristic. The element of age has influence on their choice of the pilgrimage attribute, showing the increase of age makes the decrease of the selection of this religious cultural value of olive oil. Similarly, if the number of the children in households increases, the consumers do not choose the pilgrimage olive oil. However, the information can mitigate the tendency of decrease of choice in this characteristic.

About the other attributes, the selection of the country of origin has some significance. The non-informed group when they are in the high educational level, the consumers prefer Spanish olive oil. As well, if they have many children, they choose Spanish and Tunisian olive oil than Italian. These tendencies are neutralized by the influence of the information. For the preference of the taste, the increase of the children tends to avoid the taste of pungent.

Characteristics	Definition	
Gender	Female	100%
Age in years	Mean	45.7
	Min./ max.	20/ 69
Civil status	Married	63.3%
	Not married	36.7%
Education level	Junior high school	1.3%
	Senior high school	25.3%
	Junior college	20.0%
	University	34.4%
	Master/ Doctoral course	1.9%
	Professional/tech. school	16.2%
	Others	1.0%
Number of children in household*	Mean	0.6
	Min./ max.	0/ 4
	4 and more	0.58
Household income (million Yen/year)	income ≤1	2.7%
	1 < income ≤ 2	6.8%
	2 < income ≤ 3	12.5%
	3 < income ≤ 4	14.8%
	4 < income ≤ 5	9.3%
	5 < income ≤ 6	11.6%
	6 < income ≤ 7	10.1%
	7 < income ≤ 8	6.8%
	8 < income ≤ 9	4.0%
	9 < income ≤ 10	7.2%
	10 < income ≤ 12	7.4%
	12 < income ≤ 15	4.2%
	15 < income ≤ 20	2.3%
	20 < income	0.2%

*The choices of the question about the number of children in household are none, 1, 2, 3 and 4 and over. "4 and over" was taken as 4 to calculate the mean and maximum.

Table 13. Selected sample characteristics

Total

	Main Effect Model	Cross Effect Model				
		Main Effect	Education	Age	Child	Income
Tunisia	-0.135 **	-0.158	0.019	-0.003	0.090	-0.009
	[0.065]	[0.332]	[0.053]	[0.005]	[0.083]	[0.016]
Spain	-0.219 ***	-0.511	0.075	-0.001	0.053	-0.002
	[0.066]	[0.338]	[0.054]	[0.005]	[0.083]	[0.016]
Pungent	-0.624 ***	-0.953 ***	0.056	0.005	-0.171 **	0.021
	[0.063]	[0.301]	[0.048]	[0.004]	[0.075]	[0.014]
Bitter	-0.119 *	-0.032	-0.011	-0.001	-0.060	0.012
	[0.071]	[0.356]	[0.057]	[0.005]	[0.089]	[0.017]
Pilgrim	0.113 **	0.125	0.121 ***	-0.008 **	-0.154 **	0.023 *
	[0.057]	[0.282]	[0.045]	[0.004]	[0.070]	[0.013]
Price	-0.0002 ***	-0.0002 ***				
	[0.00004]	[0.00004]				
Sample respondents	9,816	9,816				
Pseudo R2	0.0366	0.0409				
Log-likelihood	-4653.43	-4632.76				

Group 1

	Main Effect Model	Cross Effect Model				
		Main Effect	Education	Age	Child	Income
Tunisia	-0.222 **	-0.022	-0.019	-0.004	-0.024	0.011
	[0.092]	[0.488]	[0.078]	[0.007]	[0.123]	[0.020]
Spain	-0.294 ***	0.240	-0.026	-0.007	-0.101	0.007
	[0.094]	[0.494]	[0.079]	[0.007]	[0.126]	[0.021]
Pungent	-0.592 ***	-1.049 **	0.072	0.007	-0.161	0.014
	[0.089]	[0.442]	[0.070]	[0.006]	[0.112]	[0.018]
Bitter	-0.043	0.093	-0.065	-0.001	0.049	0.009
	[0.100]	[0.513]	[0.083]	[0.007]	[0.130]	[0.022]
Pilgrim	0.194 **	0.621	-0.0001	-0.009 *	-0.088	0.018
	[0.081]	[0.412]	[0.066]	[0.006]	[0.103]	[0.017]
Price	-0.0002 ***	-0.0002 ***				
	[0.00005]	[0.00005]				
Sample respondents	4,872	4,872				
Pseudo R2	0.0376	0.0412				
Log-likelihood	-2307.30	-2298.62				

Group 2

	Main Effect Model	Cross Effect Model				
		Main Effect	Education	Age	Child	Income
Tunisia	-0.047	-0.214	0.068	-0.003	0.203 *	-0.038
	[0.092]	[0.460]	[0.074]	[0.007]	[0.114]	[0.027]
Spain	-0.145	-1.183 **	0.182 **	0.002	0.190 *	-0.004
	[0.094]	[0.475]	[0.076]	[0.007]	[0.115]	[0.027]
Pungent	-0.658 ***	-0.901 **	0.045	0.004	-0.201 *	0.032
	[0.088]	[0.418]	[0.067]	[0.006]	[0.104]	[0.024]
Bitter	-0.197 *	-0.062	0.025	-0.001	-0.172	0.013
	[0.101]	[0.503]	[0.081]	[0.007]	[0.125]	[0.029]
Pilgrim	0.031	-0.309	0.227 ***	-0.009	-0.192 **	0.035
	[0.081]	[0.395]	[0.064]	[0.006]	[0.097]	[0.023]
Price	-0.0002 ***	-0.0002 ***				
	[0.00005]	[0.00005]				
Sample respondents	4,944	4,944				
Pseudo R2	0.0368	0.0471				
Log-likelihood	-2343.37	-2318.34				

Note: *, **, *** indicate significant at the 10% level, 5% level, 1% level, respectively.
Note: The coefficient correspond to “Made in Italy” is fixed at 0 as a base.
Note: The coefficient correspond to “Sweet” is fixed at 0 as a base.
Note: The coefficient correspond to “Not produced in a land of pilgrimage” is fixed at 0 as a base.

Table 14. Estimation results

	Total Coefficient	Group 1 Coefficient	Group 2 Coefficient
Tunisia	-640.336 *	-1085.868 *	-216.014
	[343.762]	[564.011]	[432.014]
Spain	-1037.433 ***	-1436.393 **	-660.953
	[392.195]	[638.028]	[487.81]
Pungent	-2948.295 ***	-2892.421 ***	-3005.411 ***
	[673.489]	[976.881]	[929.221]
Bitter	-562.114	-208.182	-901.156
	[371.797]	[506.542]	[550.863]
Pilgrimage	533.312 **	946.99 **	141.426
	[255.575]	[387.776]	[360.489]

Note: *, **, *** indicate significant at the 10% level, 5% level, 1% level, respectively.
Note: The coefficient correspond to "Made in Italy" is fixed at 0 as a base.
Note: The coefficient correspond to "Sweet" is fixed at 0 as a base.
Note: The coefficient correspond to "Not produced in a land of pilgrimage" is fixed at 0 as a base.

Table 15. WTP for each attributes

"After reading the above information about olive oil,
please rank them according to how interesting it is."

	n(TOTAL)	Information A	Information B	Information C
1st	268 (100.0%)	61 (22.8%)	122 (45.5%)	85 (31.7%)
2nd	268 (100.0%)	72 (26.9%)	105 (39.2%)	91 (34.0%)
3rd	268 (100.0%)	135 (50.4%)	41 (15.3%)	92 (34.3%)

Table 16. Consumers' interest in each explanation shown in Table 12.

The informed respondents were asked to choose the most interesting among the provided information A, B or C as shown in Table 16. To grasp the relation between the consumers' interests and the choice, I divided the Group 1 into three sub-groups of A, B, and C according to each preference of information and estimated by the multinomial logit and its cross effects resulted in Table 17. Those who are interested the most in information A as Greco-Roman myths is 22.8% of all respondents of this question, and those of B as the dietary and medicinal information in Tunisia is 45.5%, and those of C about the indigenous religion in Tunisia is 31.7%. The sub-group A choose the pilgrimage attribute significantly. It indicates the information A has strong impact on the selection of religious cultural attribute, while information B and C does not have. It is because the information A is about Greek and Roman culture which are easy to image as the cultures of olive for

Group A who choose info A as the most interesting

	Main Effect Model	Cross Effect Model				
		Main Effect	Education	Age	Child	Income
Tunisia	-0.233	-0.343	0.192	-0.014	-0.147	0.039
	[0.173]	[1.023]	[0.151]	[0.016]	[0.247]	[0.052]
Spain	-0.102	-1.296	0.331 **	-0.014	0.189	0.035
	[0.173]	[1.003]	[0.148]	[0.015]	[0.226]	[0.050]
Pungent	-0.576 ***	-0.316	0.076	-0.019	-0.130	0.078 *
	[0.166]	[0.892]	[0.131]	[0.014]	[0.213]	[0.046]
Bitter	-0.120	-0.094	-0.016	-0.004	-0.129	0.064
	[0.189]	[1.085]	[0.162]	[0.016]	[0.258]	[0.057]
Pilgrim	0.429 ***	-1.816 **	0.317 **	0.001	0.009	0.136 ***
	[0.149]	[0.876]	[0.129]	[0.013]	[0.196]	[0.044]
Price	0.0001	0.0001				
	[0.0001]	[0.0001]				
Sample respondents	1272	1272				
Pseudo R2	0.0246	0.0632				
Log-likelihood	-610.53524	-586.39665				

Group B who choose info B as the most interesting

	Main Effect Model	Cross Effect Model				
		Main Effect	Education	Age	Child	Income
Tunisia	0.171	-0.306	0.139	0.003	0.267	-0.087 *
	[0.141]	[0.696]	[0.116]	[0.010]	[0.171]	[0.050]
Spain	-0.018	-1.499 **	0.207 *	0.008	0.305 *	-0.023
	[0.145]	[0.737]	[0.122]	[0.011]	[0.172]	[0.048]
Pungent	-0.760	-0.863	0.014	0.011	-0.194	-0.030
	[0.136]	[0.642]	[0.106]	[0.009]	[0.157]	[0.045]
Bitter	-0.276	-0.662	0.055	0.012	-0.172	-0.019
	[0.152]	[0.771]	[0.127]	[0.011]	[0.184]	[0.050]
Pilgrim	-0.142	0.961	0.087	-0.024 ***	-0.184	0.004
	[0.123]	[0.590]	[0.102]	[0.009]	[0.138]	[0.039]
Price	-0.0004	-0.0004 ***				
	[0.0001]	[0.00008]				
Sample respondents	2328	2328				
Pseudo R2	0.0628	0.0749				
Log-likelihood	-1073.6017	-1059.779				

Group C who choose info C as the most interesting

	Main Effect Model	Cross Effect Model				
		Main Effect	Education	Age	Child	Income
Tunisia	-0.176	-0.231	-0.026	-0.007	0.317	-0.002
	[0.175]	[0.866]	[0.145]	[0.012]	[0.229]	[0.049]
Spain	-0.356	-0.548	0.051	0.003	-0.049	-0.003
	[0.181]	[0.896]	[0.146]	[0.013]	[0.268]	[0.048]
Pungent	-0.628	-1.348 *	0.103	0.006	-0.294	0.079 *
	[0.167]	[0.788]	[0.130]	[0.011]	[0.214]	[0.042]
Bitter	-0.147	0.613	0.103	-0.017	-0.206	-0.003
	[0.200]	[0.960]	[0.163]	[0.014]	[0.278]	[0.055]
Pilgrim	-0.095	0.193	0.282 **	-0.007	-0.488 **	-0.037
	[0.158]	[0.769]	[0.126]	[0.011]	[0.230]	[0.043]
Price	-0.0002	-0.0002 **				
	[0.0001]	[0.0001]				
Sample respondents	1344	1344				
Pseudo R2	0.0426	0.0645				
Log-likelihood	-633.1733	-618.72984				

Note: *, **, *** indicate significant at the 10% level, 5% level, 1% level, respectively.
Note: The coefficient correspond to “Made in Italy” is fixed at 0 as a base.
Note: The coefficient correspond to “Sweet” is fixed at 0 as a base.
Note: The coefficient correspond to “Not produced in a land of pilgrimage” is fixed at 0 as a base.

Table 17. Estimation results according to information preference

Japanese consumers. The product image of pilgrimage olive oil is accepted by being associated to the less virtual information for the consumers compared to the highly virtual information of Tunisia.

According to the result of cross effect model, both sub-group A and C has positive significance on the educational level and the choice of pilgrimage attribute. Because information A and C is directly about religion such as myths and tree veneration, those who prefer such information evaluate the pilgrimage olive oil highly when they have high educational level. Sub-groups A and C are considered to have interest in religion by the nature of their characters, and if highly educated, they may contain certain knowledge about that. On the other hand, sub-group B does not have such significance. Those who are interested in the functionality such as the cultivation, dietary or medicinal culture are not fascinated to the pilgrimage olive oil even if they are highly educated.

6. Conclusion

In this chapter, the religious cultural meanings of olive discussed in the previous chapters are examined whether they can be positive attributes to differentiate a product in a global market. The results of the choice experiment show that there is positive impact of religious and cultural attribute of olive oil on consumers' preference. The consumers are willing to pay a premium of pilgrimage olive oil between 141 JPY and 946 JPY. If the consumers are provided the additional information about religious and cultural background of olive oil, the premium of pilgrimage olive oil is increased 6.7 times (946 JPY) of the premium given by non-informed consumers (141 JPY), which indicates a strong effect of the religious cultural information on consumers' choice of the attribute of pilgrimage.

Through the empirical results, the consumers' preference on Italian olive oil than Tunisian and Spanish ones are observed. It seems to be because of the level of familiarity and associability. By the previous questionnaire to the choice experiment, I examined the associability of religions or cultures, and an image of olive by asking "which of these religions/ cultures do you associate with olive?" It was multiple-choice question and 44.2% of the responds choose Greek, and 35.3% choose Roman culture. According to the results, the religious and cultural image of olive is more associable with Greco-Roman culture than the others such as Christian (13.4%), Islamic (2.0%), or Amazigh culture (0.3%). It may be the reason of the significance of Italian olive oil to be chosen by informed group compared to non-informed group.

To examine consumers' interest in cultural and religious characteristics of olive, I provided three alternatives and a "not applicable" choice for each of the three questions on sacredness, indigenity, and antiquity. The respondents who chose "not applicable" is 61.3%, 71.2%, 56.3% respectively, indicating more than 60% in average of the respondents are not interested in religious and cultural characteristics such as "made by a sacred olive tree," "made by olive tree which is

considered to bring fertility in Amazigh culture," or "made by olive tree surviving more than one thousand years." The low interest on these characteristics is possibly because the only limited information in religious and cultural aspects of olive has been provided among Japanese consumers. However, if the respondents are provided the religious cultural element of "olive oil made in the land of pilgrimage" as one of the attributes to choose, they give high evaluation on this attribute especially if they are also provided the additional information of the religious and cultural background of olive.

Concerning the results of the cross effect, the high level of education seems to be generally related to the high level of acceptance and understanding on cultural and religious values. On the other hand, high level of age and increase of the number of children per household tend to avoid religious and cultural value, possibly because both aged people and those with children try to keep conservative and standardized products to be chosen than palatable and characteristic products. For them, pilgrimage olive oil is too strange and suspicious.

According to the above results sorted by sub-group A, B and C, those who are interested in information A tend to choose "pilgrimage olive oil." Also, the results of the previous questions to measure the consumers' knowledges on the religious cultural aspects of olive show this deviation. To the first question "Do you know that olive oil is used in rituals?" the ratio of those who answered "Yes, I know" is 34.4% of sub-group A, 11.5% of sub-group B, 10.6% of sub-group C. To the second question "Do you know that olive oil is used as holy oil?" 39.3% of sub-group A, 12.3% of sub-group B, 12.9% of sub-group C answered "Yes." It indicates that the ratio of the people who has religious and cultural knowledge of olive in sub-group A is from 26.3 to 26.7% higher than that in sub-groups B and C. Thus, the consumers who are interested in and have knowledge about religious and cultural aspects of olive could be found more in sub-group A than B or C.

Because of the over-lapping of the people with such knowledge and the people interested in Greco-Roman cultures, it seems effective to use the Greco-Roman images so far to promote olive oil with religious and cultural backgrounds. On the other hand, to use unfamiliar characteristics such as Tunisia requires the diffusion and the permeation of their religious cultural backgrounds by much more active promotion. However, they seem to have a potential attractiveness since the results of the above mentioned question on favorable information among A, B, and C indicates that 77.2% of the respondents chose the information B and C, the information about Tunisia, as "the most interesting information" (Table.16). Thus, it may be possible that the evaluation of Tunisian olive oil may increase if the consumers are provided more detailed information about the "story" of the product through promotion and labelling.

General Conclusion

This research has been carried out under the question of whether the cultural religious value on "food" disclosed by the traditional production and the religious acts concerning olive in Tunisia, can be a "new value," that is, an innovative value for the people who live in modern society. In the global society that expand the definition of health and aim to achieve overall well-being including spirituality, it is very important to learn from the traditional society the complex meaning of "food" not limited to nutrition intake. While olive has attracted considerable attention by the pharmaceutical importance of the Mediterranean diet, it is also an important motif that often appears in the myths and the scriptures of the Mediterranean world and seems to have a strong religious significance. However, there have been few studies to mention about the religious phenomena relating to olive, especially in North Africa where the religious characteristics are still remarkable. Also in socioeconomics, there has been little research on the influence of cultural and religious meaning of olive on consumer behavior. In this study, while I interpreted the meaning and the social role of the religious phenomena found in the fieldwork in Tunisia using the theoretical frameworks of saint veneration and history of religions, I employed a socioeconomic analysis of consumer behavior to examine whether the cultural religious meaning of olive can bring an innovative value for consumers who belong to different cultural background than the Mediterranean world.

In Chapter 1, I took an overview of the symbolic manifestations of olive and olive oil through the varieties of myths, figures, customs and teachings which show how olive relates to the life of the Mediterranean region. Those expressions of olive could be classified into certain types of symbols e.g. grace of God, peace (purity and governance), vitality (fire and light), Cosmic Axis (center and domination), or fertility. It was confirmed that the belief of olive and olive tree as a symbol has existed widespread of in the history of the Mediterranean Region under the diversified religions and cultures and these symbols have been modified and changed the meaning with the adaptation to new cultural influences. The religious function of the symbolism of tree such as a sacred tree or a plant ritual could be the way to express the vital cosmos which repeatedly re-birth, by which olive is bestowed the image of the everlasting life in Greek myth and in the Old Testament. Under the monotheistic structure, olive becomes an expression of the Absolute Being as the light of God set on the olive tree. Also, it is found that the symbolization of a thing that is essential for life such as olive, is inevitably unified into a new religious system when it becomes dominant. Then, I examined the comprehensible image of olive in North Africa remaining through various cultural influences by comparative analysis with the result of the fieldwork in Tunisia and the ethnographies on Moroccan customs of olive in the 1920s by Westermarck. A wide array of customs was found to be in common, and the three categories of customs according to their functions, "Exorcism and Purification," "Ritual tools and Medium of powers," and "Fertility and Blessing," were recognized as still existing

in Tunisia. Social elements such as increasing literacy rate, literal understanding of Quranic doctrine, decline of village communities, and the destabilization of the economic and political situations in these days, have influenced the traditional customs considerably. Although the traditional customs of olive in Tunisia has no more influential to prescribe their whole lives, they adopt the customs which is adequate to the contemporary situation and determine their attitude to that.

In chapter 2, in order to capture the current olive beliefs in Tunisia from the context of saint veneration prevailing in North Africa, the classification of saints concerning the relationships between saint veneration and veneration of nature, was performed based on the saint veneration revered in the four villages of Arab and Amazigh in the inland area of the governorate of Gabes, South Tunisia. To clarify them, I brought four categories of saint into the 16 sanctuaries of the border between Arab and Amazigh influences, as "Missionary saint," "Local saint," "Ancestral saint," and "Spiritual saint" according to the nature of each saint described by caretakers, pilgrims, and villagers. The categories showed the influence of Islam on each saint veneration in different levels. It is suggested that the more a village has been Arabized, the more they have authorized saints. On the contrary, the less a village is influenced by Arab-Islamic dominance, the more I could find the folk and indigenous levels of saint veneration in South Tunisia to combine saints and nature freely and organically. Thus it can be suggested that the indigenous elements of "veneration of nature" have survived the pressure by Islam under Arabization, and it have been transformed into something acceptable within Islam, namely, belief of saints, or *jinn* used by saints. Religious sensitivity toward natural objects has been altered into a form that can suit Islam. This chapter concludes that saint veneration's absorption of nature veneration has uniquely originated in the religious tension between open sensitivity to the surrounding reality and keen sensitivity for One God. These complex beliefs regarding nature as saints are confirmed to be still experienced by the people symbolically and directly to the various extents.

Following the previous discussion on the general form of the syncretism of veneration of nature and saints, chapter 3 focused on the case of village T, a traditional Amazigh village which characteristically showed the belief of olive in the pilgrimages (*ziyāra*) to the old olive trees. I discussed how the pilgrimages to the old olive trees relates to both saint veneration and the symbolism of trees employing the two opposite standpoints of Westermarck and Dermenghem on the relationship between saints and nature. Based on the ritual actions and the narratives of pilgrims as well as the other olive symbols found in the village, I found that the pilgrimages to the olive trees are not an perversion of official saint veneration, but they originated from the veneration of ancestors and spirits, and one of the diversified forms of saint veneration owing to syncretism with the pre-Islamic belief. The olive saint complexes represented their pre-Islamic element of old tribal guardian deities that played central axes of tribes. It was also confirmed that through pilgrimages to each other's sanctuary, inter-tribal ties were formed centered upon olive-saint complexes. Also, the

religious meanings of olive-saint complexes are experienced by pilgrims as several primitive elements out of Islam, such as a tree of life, mother, fertility, excess of power, and *mysterium tremendium*. Through the manifestation of the sacred on the olive-saint complexes, the world and self can be newly defined by its overwhelming existence, thus the pilgrimages to the olive-saint complexes serve as occasions of healing and renewal in times of trouble. This chapter revealed that archaic factors from outside Islam still strongly affect the beliefs and practices of the people today. The veneration of olive-saint complexes represents an experience of the renewal of the world through contact with the sacred by means of the peculiar symbolism of the olive tree.

Chapter 4 reviewed the traditional agriculture and the dietary and medicinal culture of olives in South Tunisian villages, and I examined how the importance of olives as a dietary resource in different levels of their life as agriculture, processing, cooking and medicating is expressed in the region's agricultural festival. Because of limited cultivation both in quantity and in productivity, South Tunisia continues to preserve its traditional olive farming methods and the traditional oil extraction method using animals endures to these days. Besides consuming olives and olive oil in their daily meals, South Tunisians also have their own methods of preservation and of utilizing residues. While the functional values of some traditional remedies with olive are evidenced such as anti-inflammatory or antimicrobial effects, it was also found that some remedies were regarded to possess symbolic effects such as "a medicine to cure all" or aphrodisiacs in the context of the usage of traditional remedies. As same as the festival foods or pilgrimage foods, the medicinal olive oil with symbolic effect is repeatedly reproduced as a paradigmatic food. Eating and using it as the mythical original meal by the original method reveals the source of life. Such a paradigm of human existence is expressed in a condensed form of the whole life of the village over olive even in the new festival of *Mahrajan*. In particular, the young shoot of olive attached to the palanquin that walked around the village symbolically revitalized the village by the regenerative power of olive shoot to grow, and in the co-eating of newly pressed olive oil and bread, the harvest of that year could make the people brand-new, bring them a power for prosperity, and the future harvest. From the perspective of festive quality, it is confirmed that the annual *Mahrajan* brings a sense of fertility through their imitative actions of oil pressing and marriage presenting the renewal of the village as a new cosmos.

Chapter 5 examined the religious cultural images of olive that are found through the previous chapters can be positive attributes to differentiate a product in a global market. The peculiar meaning of olive of the Amazigh villages in South Tunisia, which has never been known so far, is in question whether it is accepted as a new value, a new "story" of olive oil. I conducted an internet survey to Japanese consumers to explore the impact of religious cultural attributes of olive oil on the consumers' willingness to pay with the choice experiment. The impact of the information of religious cultural images of olive on the consumers' choice is investigated, based on the

mythological background of olive in the Mediterranean region discussed in Chapter 1, the veneration of sacred olive trees in South Tunisian village in Chapter 2 and 3, and the local dietary and medicinal applications of olive in Chapter 4. The results of the choice experiment show that there is positive impact of religious and cultural attribute of olive oil on consumers' preference. The consumers are willing to pay a premium of pilgrimage olive oil between 141 JPY and 946 JPY. If the consumers are provided the additional information about religious and cultural background of olive oil, the premium of pilgrimage olive oil is increased 6.7 times (946 JPY) of the premium given by non-informed consumers (141 JPY), which indicates a strong effect of the religious cultural information on consumers' choice of the attribute of pilgrimage. Through the empirical results, the consumers' preference on Italian olive oil than Tunisian and Spanish ones are observed. It seems to be because of the associability of a religious or cultural image of olive oil with Greco-Roman cultures. However, among three of information, the Greco-Roman mythologies, the Tunisian dietary and medicinal applications, and the veneration of sacred olive trees in South Tunisia, the respondents chose the information about Tunisia is more interesting than that of Greece and Rome. Thus they seem to have a potential attractiveness since if the consumers are provided more detailed information about the "story" of the product through promotion and labelling.

The beliefs and customs related to olive are the meaning of olive emerged from their world, in other words, their own plane of reference, and thus the straightly expressed meaning of "food" for human beings. "Eating" is the most fundamental survival action for humans and other living things. We can keep our individual entities by taking in something outside ourselves to inside, and discharge it from inside. That is, we live by eating the world, and the world is destined to "eat" us in any levels as predators or bacteria. On this primal communication, we could be united with the world by sacrificing and eating it, and the world comes out in front of us as "the sacred." It is understandable that the religious meanings of "food" as offerings, mythical origins, holy meals or prohibited foods are based on the human's primitive experience of "eating."

"Eating" is the experience of the communication or rather, unification with the sacred, and the experience that bring a person to be the sacred. Because, when people sacrifice the world, the world becomes the sacred. People who eat this remains also become "sacrificed" as seen in this study, so the people become the sacred through the ritualistic process. This communication based on the cycle of sacralization of the profane (offering), breach of the sacred into a person (eating), and the sacralization of a person (scarification of a person). The sacred and the profane, that are determined by Eliade as "two modes of being in the world, two existential situations assumed by man in the course of his history" have an ontological rapture among them but contradictory, the sacred manifests itself only in the profane (Eliade 1959: 15). The secular world is occasionally communicating with the sacred in religious societies where myths or religious values stay in core of

their lives, and this communication is revealed in the occasion of annual events, rites of passages, communal rituals, and the critical momentum. “Eating” is the religious experience that reveals the human’s relation to the sacred, and its meaning is expressed in each customs symbolically. Holy bread is a symbol of “eating the sacred,” and it reminds us the presupposition that the every meal is the flesh and the blood of the son of God. This idea of “prototypical meal” of Bynum can be seen in the communication of olive and the villagers of T, that is, their ritualistic actions to eat olive, to offer sacrifice to olive, and then to be eaten by olive. The meaning of “to be eaten by olive” is expressed by their old custom to burry a person near to the olive who were very close to the tree and identification of the dead and the sacred olive. There a fundamental relationship is observed that the people are made of olive, and olive trees are made of the people. The meaning of food and the meaning of their lives are exposed through the pilgrimage to olive-saint complexes. As well as the most of agricultural communities, the origin of their sacrifice to olive, sacrificial process, communal feast are in the basis of their community, and is the prototype of all of their meals. In the agricultural tradition, the world regains the sacred meaning by sacralization of the harvested and the harvestings.

This research has been achieved under the question of whether the above cultural religious value on "food" disclosed by the traditional production and the religious acts concerning olive in Tunisia, can be a "new value," that is, an innovative value for the people who live in modern society. From the results obtained by the consumer behavior analysis of socioeconomics, it is proved that the religious meaning of olive in Tunisia has a positive impact on the consumers’ willingness to pay for olive oil even though they are Japanese consumers, who belong to different cultural contexts. As a result, I confirmed that the cultural and religious values of olive which have not been used so far in the global market, can enrich consumers' images of "olive" and can contribute to the innovation.

Acknowledgement

I would like to express my deepest gratitude to Prof. Kenichi KASHIWAGI whose comments and suggestions were of inestimable value for my study. Special thanks also go to Prof. Mitsutoshi NAKAJIMA, Prof. Hiroko ISODA, Prof. Toshikazu KAMIYA, and Prof. Hirofumi TSUSHIRO whose insightful comments made enormous contribution to my work. My sincere thanks to the funding from JST-JICA SATREPS Program "Valorization of Bio-resources based on Scientific Evidence in Semi- and Arid Land for Creation of New Industry" and JSPS KAKENHI Grant Number 15K16623. Finally, I would like to thank the members of Alliance for the Research on the Mediterranean and North Africa, University of Tsukuba for their kind support that made it possible to complete this study.

Bibliography

Primary Sources

Herodotus (1890). *The history of herodotus*. (G.C. Macaulay, Trans.). London: MacMillan.

King James Bible ONLINE. (2007, November). Retrieved from https://www.kingjamesbibleonline.org/

Pseudo-Apollodorus (1921). *The library, vol. 2: book 3. 10-16* (J. G. Frazer, Trans.). Cambridge: Harvard University Press.

Quran (M. Pickthal, Trans.). Retrieved from http://www.searchtruth.com/list.php

Public Documents

Demographic survey result of population based on the Basic Resident Registration, e-Stat, Japanese Ministry of Internal Affairs and Communications, Retrieved from https://www.e-stat.go.jp/stat-search/files?page=1&layout=datalist&toukei=00200241&tstat=000001039591&cycle=7&year=20170&tclass1=000001039601&stat_infid=000031598570&second2=1

European Union (2013). "EU Commission implementing regulation (EU) No 1348/2013 of 16 December 2013 amending Regulation (EEC) No 2568/91 on the characteristics of olive oil and olive-residue oil and on the relevant methods of analysis" Official Journal of the European Union, L 338/31-67. Retrieved from https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2013.338.01.0031.01.ENG

Ministry of Agriculture, Forestry and Fisheries (2012). 2050 nen ni okeru syokuryōjikyū mitōshi［2050 年における食糧自給見通し］. Retrieved from http://www.maff.go.jp/j/zyukyu/jki/j_zyukyu_mitosi/pdf/base_line_bunseki.pdf

Ministry of Internal Affairs and Communications (2017). Internet no fukyū jyōkyō［インターネットの普及状況］. Heisei 29 nendo ban jōhō tsūshin hakusho no pointo［平成 29 年度版情報通信白書のポイント］. Retrieved from http://www.soumu.go.jp/johotsusintokei/whitepaper/ja/h29/html/nc262120.html

République Tunisienne Ministère du Développement de l'Investissement et de la Coopération Internationale-- Office de Développement du Sud, Gouvernorat de Gabès en chiffres 2014, Retrieved March, 2016 from http://www.ods.nat.tn/upload/CHIFGABES.pdf

United Nations (2017) .World Population Prospects: Key findings and advance tables 2017 Revision, Retrieved from https://esa.un.org/unpd/wpp/Publications/Files/WPP2017_KeyFindings.pdf

Academic Resources

Abdelli, F., Ouessar, M., & Khatteli, H. (2012). Méthodologie d'identification des ouvrages existants et des sites potentiels pour les jessour. *Revue des sciences de l'eau, 25(3),* 237-254.

Abut, E., Guveli, H., Yasar, B., Bolukbas, C., Bolukbas, F. F., Ince, ...Kurdas, O. O. (2009). Administration of olive oil followed by a low volume of polyethylene glycol-electrolyte lavage solution improves patient satisfaction with right-side colonic cleansing over administration of the conventional volume of polyethylene glycol-electrolyte lavage solution for colonoscopy preparation. *Gastrointest Endosc, 70(3),* 515-521.

Abu-Zahra, N. (1982). *Sidi Ameur: A Tunisian village*. London: Ithaca Press.

Abu-Zahra, N. (1988). The rain ritual as rites of spiritual passage. *International Journal of Middle East Studies, 20(4),* 507-529.

Agarwal, K. N., Gupta, A., Pushkarna, R., Bhargava, S. K., Faridi, M. M. A., & Prabhu, M. K. (2000). Effects of massage & use of oil on growth, blood flow & sleep pattern in infants, *Indian Journal of Medical Research, 112,* 212-217.

Akahori, M. (1995). When the saints go marching into the desert. *Orient, 38(2),* 103-120.

Akahori, M. (2005). Seijya shinkō kenkyū no saizensen［聖者信仰研究の最前線］. In M. Akahori, Y. Tounaga, & T. Horikawa (Eds.), *Islamic area studies 7: Sufism and saint veneration in Islam［イスラームの神秘主義と聖者信仰］*(pp. 23-40). Tokyo: University of Tokyo Press.

Akahori, M. (2008). Seijya sūkei no matsuri, seijya shinkō no tsudoi［聖者崇敬の祭り、精霊信仰の集い］. In M. Akahori (Ed.), *Minshū no Isurāmu: Sūfī, seijya, seirei no sekai［民衆のイスラーム：スーフィー・聖者・精霊の世界］*(pp. 3-12). Tokyo: Yamakawa.

Alirezaei, M., Dezfoulian, O., Neamati, S., Rashidipour, M., Tanideh, N., & Kheradmand, A. (2012a). Oleuropein prevents ethanol-induced gastric ulcers via elevation of antioxidant enzyme activities in rats. *Journal of Physiology and Biochemistry, 68(4),* 583-592.

Alirezaei, M., Dezfoulian, O., Kheradmand, A., Neamati, S. H., Khonsari, A., & Pirzadeh, A., (2012b). Hepatoprotective effects of purified oleuropein from olive leaf extract against ethanol-induced damages in the rat. *Iranian Journal of Veterinary Research, 13(3),* 218-226.

Altman, N. (2000). *Sacred Trees*. NewYork, NY: Sterling Publishing.

Amabile, T. M. (1983). The social psychology of creativity: A componential conceptualization. *Journal of Personality and Social Psychology, 45*(2), 357-376.

Arnold, P. P. (1999). *Eating landscape: Aztec and European occupation of Tlalocan*. Niwot, CO: University Press of Colorado.

Asad, T. (2003). *Formation of the secular: Christianity, Islam, modernity.* California, CA: Stanford University Press.

Bachelard, G. (1988). *The flame of a candle* (J. Caldwell, Trans.). Dallas, TX: The Dallas Institute of Humanities and Culture. (Original work published 1961)

Baird, I. G. & Quastel, N. (2011). Dolphin-safe tuna from California to Thailand: Localisms in environmental certification of global commodity networks. *Annals of the Association of American Geographers, 101(2),* 337-355.

Bakar, A., Lee, R., & Rungie, C. (2012). The use of religious symbols on packaging to influence product preference and rating. Paper for 2nd Global Islamic Marketing Conference (GIMC), Abu Dhabi. Retrieved from http://search.ror.unisa.edu.au/media/researcharchive/open/9915909492401831/53108456920001831

Barjol, J. L. (2013). Introduction. In R. Aparicio, & J. Harwood (Eds.), *Handbook of olive oil* (pp. 1-17). New York, NY: Springer.

Basset, H. (1920). *Le culte des grottes au Maroc*. Algier: Ancienne Maison Bastide-Jourdan, Jules Carbonel.

Basset, A., Bercher, L., Brunschvig, R., Calvet, M., Cardoso, A., Despois, J., ... Saumagne, C. (1950). *Initiation a la Tunisie*. Paris: Adrie-Maisonneuve.

Bataille, G. (1967). *La part maudite*. Paris: Les Éditions De Minuit. (Original work published 1949)

Bel, A. (1938). *La religion Musulmane en Berbérie: Esquisse d'histoire et de sociologie religieuses vol. I*. Paris: Librarie Orientaliste Paul Geuthner.

Ben-Hamza, K. (1977). *The cave-dwellers of Matmata: Ritual and economic decision-making in a changing community* (Doctoral dissertation submitted to Indiana University). Retrieved from Bibliothèque de Institut des Belles Lettres Arabes (IBLA).

Ben Mechlia, N., Oweis, T., Masmoudi, M., Khatteli, H., Ouessar, M., Sghaier, N., Anane, M., & Sghaier, M. (2009). *Assessment of supplemental irrigation and water harvesting potential: Methodologies and case studies from Tunisia*. Aleppo, Syria: ICARDA.

Berger, P. L. (1967). *The sacred canopy: Elements of a sociological theory of religion*. New York, NY: Doubleday.

Berger, P. (2012). Food. In K. A. Jacobson, H. Basu, A. Malinar, & V. Narayanan (Eds.), *Brill's encyclopedia of Hinduism*. Brill, Online publication.

Boardman, J. (1976). The olive in the Mediterranean: Its culture and use. *Philosophical transactions of the royal society B, 275*, 187-196.

Bond, C. A., Thilmany, D., & Bond, J. K. (2008). Understanding consumer interest in product and process-based attributes for fresh produce. *Agribusiness, 24 (2)*, 231-252.

Boskou, D. (2006). Characteristics of the olive tree and olive fruit. In D. Boskou (Ed.), *Olive oil: Chemistry and technology* (2nd ed.) (pp. 13-19). Champaign, IL: AOCS Press.

Brett, M., & Fentress, E. (2007). *The Berber*. Oxford: Blackwell Publishing. (Original work

published 1996)

Bruun, D. (1898). *The cave dwellers of Southern Tunisia*. London: W. Thacker.

Buitelaar, M. (1993). *Feasting and fasting in Morocco: Women's participation in Ramadan*. Oxford: Berg.

Bynum, C. W. (1987). *Holy feast, holy fast: The religious significance of food to medieval women.* Berkeley, CA: University of California Press.

Canaan, T. (1927). *Mohammedan saints and sanctuaries in Palestine*. London: Luzac.

Caramia, G., Gori, A., Valli, E., & Cerretani, L. (2012). Virgin olive oil in preventive medicine: From legend to epigenetics, *European Journal of Lipid Science and Technology, 114*, 375-388.

Casanova, J. (1994). *Public religions in the modern world*, Chicago, IL: University of Chicago Press.

Cassar, P. (1964). Medical votive offerings in the Maltese islands. *The Journal of the Royal Anthropological Institute of Great Britain and Ireland, 94(1),* 23-29.

Cembalo, L., Migliore, G., & Schifani, G. (2012). Consumers in postmodern society and alternative food networks: The organic food fairs case in Sicily. *New Medit, 11(3),* 41-49.

Chafik, M. (2004, 1989). *A brief survey of thirty-three centuries of Amazigh history* (A. Azeriah, Trans.). Rabat: Institut Royal de la Culture Amazighe.

Chegini, F., Molan, S. B., & Kashanifar, S. S. (2016). An examination of the impact of cultural values on brand preferences in Tehran's fashion market. *Procedia Economics and Finance, 36,* 189-200.

Chirico, F. (2016). Spiritual well-being in the 21st century: It's time to review the current WHO's health definition? *Journal of Health and Social Science*s, *1(1),* 11-16.

Clark, B., Stewart, G. B., Panzone, L. A., Kyriazakis, I., & Frewer, L. J. (2017). Citizens, consumers and farm animal welfare: A meta-analysis of willingness-to-pay studies. *Food Policy*, *68*, 112-127.

Comstock, W. R. (1972). *Religion & man: The study of religion & primitive religion*. New York, NY: Harper & Row.

Crapanzano, V. (1973). *Hamadsha: A study in Moroccan ethnopsychiatry*. Berkeley, CA: University of California Press.

Crapanzano, V. (1975). Saints, jnun, and dreams: An essay in Moroccan ethnopsychology. *Psychiatry*, *38*, 145-159.

Crapanzano, V. (1980). *Tuhami: Portrait of a Moroccan*. Chicago, IL: University of Chicago Press.

Crawley, A.E. (1911). *The mystic rose: A study of primitive marriage*, London: MacMillan.

Crawley, A.E., Cook, W., Jolly, J. (1908-1926). Food. In J. Hastings (Ed.), *Encyclopaedia of religion and ethics* (vol. 13). Edinburgh: T. & T. Clark.

Daccache, A., Lion, C., Sibille, N., Gerard, M., Slomianny, C., Lippens, G., & Cotelle, P. (2011).

Oleuropein and derivatives from olives as Tau aggregation inhibitors. *Neurochemistry International, 58(6),* 700-707.

Dafni, A. (2002). Why are rags tied to the sacred trees of the holy land? *Economic Botany, 56(4),* 315-327.

Dafni, A. (2006). On the typology and the worship status of sacred trees with a special reference to the Middle East. *Journal of Ethnobiology and Ethnomedicine*, 2(26). DOI: 10.1186/1746-4269-2-26

Dafni, A. (2007). Rituals, ceremonies and customs related to sacred trees with a special reference to the Middle East. *Journal of Ethnobiology and Ethnomedicine*, 3(28). Retrieved from https://doi.org/10.1186/1746-4269-3-28

Dalley, S. (Ed. & Trans.). (2000). *Myths from Mesopotamia: Creation, the Flood, Gilgamesh, and others.* Oxford: Oxford University Press. (Original work published 1989)

De Bunsen, V. (1910). *The soul of a Turk*. London: John Lane the Bodley Head.

Degeratu, A. M., Rangaswamy, A., & Wu, J. (2000). Consumer choice behavior in online and traditional supermarkets: The effects of brand name, price, and other search attributes. *International Journal of Research in Marketing, 17,* 55-78.

Dekhili, S., & d'Hauteville, F. (2009). Effect of the region of origin on the perceived quality of olive oil: An experimental approach using a control group. *Food quality and preference, 20(7),* 525-532.

Dermenghem, E. (2011). *Le culte des saints dans l'Islam Maghrébin*. Paris: Gallimard. (Original work published 1954)

Di Giovacchino, L. (2013). Technological aspects. In R. Aparicio, & J. Harwood (Eds.), *Handbook of olive oil* (pp. 57-96). New York, NY: Springer.

Dilthey, G. (1982). *Kaisyakugaku no seiritsu［解釈学の成立］[Die Entstehung der Hermeneutik]* (A. Kuno, Trans.). Tokyo: Ibunsya. (Original work published 1900)

Doughty, C. M. (1921). *Travels in Arabia Deserta volume one*. London: Jonathan Cape/Medici Society, Ltd.

Douglas, M. (2003). *Food in the social order.* London: Routledge.

Doutte, E. (1984). *Magie and religion dans l'Afrique du Nord.* Alger: Typographie Adolphe Jourdan. (Original work published 1909)

Doutte, E. (1900). *Notes sur l'Islam Maghribin: les marabouts*. Paris: Ernst Leroux.

Dukinfield Astley, H. J. (1910). A sacred spring and tree at Hammam R'Irha, Algeria. *Man, 10,* 122-123.

Du Paty du Clam, A. (1982). *Excurions chez les Matmata*. Retrieved from Bibliothèque de Institut des Belles Lettres Arabes (IBLA).

Durie, M. (1985). A Maori perspective of health. *Social Science & Medicine, 20(5),* 483-6.

Efe, R., Soykan, A., Cürebal, I., & Sönmez, S. (2012). Olive and olive oil culture in the Mediterranean basin. In R. Efe, M. Ozturk, & S. Ghazanfar (Eds.), *Environment and Ecology in the Mediterranean Region* (pp. 51-62). Newcastle upon Tyne: Cambridge Scholars Publishing.

Eliade, M. (1959). *The sacred and the profane* (W. R. Trask, Trans. from French). New York, NY: A Harvest Book. (Original work published 1957)

Eliade, M. (1974). *The myth of the eternal return [Le mythe de l'éternel retour]* (W. R. Trask, Trans.). New York, NY: Princeton University Press. (Original work published 1954)

Eliade, M. (1984). *The quest: History and meaning in religion*. Chicago, IL: University of Chicago Press. (Original work published 1969)

Eliade, M. (1996). *Patterns in comparative religion [Traité d'histoire des religions]* (R. Sheed, Trans.). Lincoln, NE: University of Nebraska Press. (Original work published 1949)

Evans-Pritchard, E. E. (1956). *Nuer religion*. The Clarendon Press: Oxford.

Faklaris, P., & Stamatopoulos, V. (2006). The Greek olive tree. In Hellenic Folklore Research Centre of the Academy of Athens (Ed.), *Ode to the olive tree* (pp. 74-83). Athens: General Secretariat for Olympic Utilization, Hellenic ministry of Culture.

Fiske, N. W. (1839). *Manual of classical literature*. Philadelphia, PA: Frederick W. Greenough.

Fitó, M., Cladellas, M., de la Torre, R., Martí, J., Alcántara, M., Pujadas-Bastardes, M. ...Covas, M. I. (2005). Antioxidant effect of virgin olive oil in patients with stable coronary heart disease: A randomized, crossover, controlled, clinical trial. *Atherosclerosis, 181*, 149-158.

Fitó, M., Guxens, M., Corella, D., Sáez, G., Estruch, R., de la Torre, R., ...Covas, M. I. (2007). Effect of a traditional Mediterranean diet on lipoprotein oxidation: A randomized controlled trial. *Archives of Internal Medicine, 167*, 1195-1203.

Florax, R. J. G. M., Travisi, C. M., & Nijkamp, P. (2005). A meta-analysis of the willingness to pay for reductions in pesticide risk exposure. *European Review of Agricultural Economics, 32(4)*, 441-467.

Fogg, W. (1940). A Moroccan tribal shrine and its relation to a nearby market. *Man, 40*, 100-104.

Forbes, H. A., & Foxhall, L. (1978). The queen of all trees: Preliminary notes on the archaeology of the olive. *Expedition, 21(1)*, 37-38.

Frazer, J. G. (1920). *The magic art and the evolution of kings vol. I (The golden bough: A study in magic and religion* (3rd ed.). *part I)*. London: MacMillan.

Frese, P. R., & Gray, S. J. M. (1987). Trees. In M. Eliade (Ed.), *Encyclopedia of religion* (vol. 5, pp. 26-33). New York, NY: MacMillan.

Futatsuyama, T. (2013). Reconsideration on faith concerning of trees in the Islamic world: In the case of olive in Tunisia. *Kyoto Bulletin of Islamic Area Studies, 6*, 274-292.

Gabsi, Z. (2003). *An outline of the Shilha (Berber) vernacular of Douiret (Southern Tunisia)* (Doctoral dissertation submitted to University of Western Sydney). Retrieved from

https://researchdirect.westernsydney.edu.au/islandora/object/uws:573

Galili, E. Stanley, D. J., Sharvit, J., & Weinstein-Evron, M. (1997). Evidence for earliest olive-oil production in submerged settlements off the Carmel Coast, Israel. *Journal of Archaeological Science, 24(12)*, 1141-1150.

Gasmi, I., Moussa, M., & Rejeb, H. (2014). The Jessour: Wise traditional technique for water and soil conservation in southeastern Tunisia (the case of micro-watershed El-Jouabit, Mareth, Gabes). *Research Journal of Social Science and Management, 4(4)*, 25-33.

Geertz, C. (1993, 1973). Religion as a cultural system. In *The interpretation of cultures: selected essays* (pp. 87-125). London: Fontana Press.

Giesecke, A. (2014). *The mythology of plants: Botanical lore from ancient Greece and Rome*. Los Angeles, CA: J. Paul Getty Museum.

Gellner, E. (1969). *Saints of the Atlas*. London: Weidenfeld & Nicolson.

Gonzalez-Lamas, R. (2018). Can China become a major olive oil producer? *Olive Oil Times*, July 16, 2018, Retrieved from https://www.oliveoiltimes.com/olive-oil-business/can-china-become-a-major-olive-oil-producer/63700

Goor, A. (1966). The place of the olive in the holy land and its history through the ages. *Economic Botany, 20(3)*, 223-243.

Gopalakrishnan, S., & Damanpour, F. (1997). A review economics of innovation research in sociology and technology management. *Omega International Journal of Management Science, 25(1)*, 15-28.

Grunert, K. G. (1997). What's in a steak? A cross-cultural study on the quality perception of beef. *Food Quality and Preference, 8(3)*, 157-174.

Haland, E. J. (2012). The ritual year of Athena: The agricultural cycle of the olive, girls' rites of passage, and official ideology. *Journal of Religious History, 36(2)*, 256-284.

Hehn, V. (1885). *The wanderings of plants and animals*. London, Swan Sonnenchein.

Hensher, D. A., Rose, J. M., & Greene, W. H. (2005). *Applied choice analysis*. Cambridge: Cambridge University Press.

Hesselbein, F., & Johnston, R. (2002). *On creativity, innovation, and renewal.* New York, NY: John Wiley.

Hilton-Simpson, M.W. (1915). Some Algerian superstitions noted among the Shawia Berbers of the Aurès Mountains and their nomad neighbours. *Folklore, 26(3)*, 225-254.

Hoffman, V. J. (2002). Festivals and commemorative days. In J. D. McAuliffe (Ed.), *Encyclopaedia of the Qur'ān* (vol. 2, pp. 203-208). Leiden: Brill.

Hsu, C., Lin, J., & Lin, R. (2012). A study on consumer perception and preference of cultural creative products. Paper for International Conference on Paradigm for Design Education 2012,

221-226. Retrieved from https://pdfs.semanticscholar.org/c9db/ac7b904125b4b0384beb49cb6d2856e09ffb.pdf

Hu, W., Batte, M. T., Woods, T., & Ernst, S. (2011). Consumer preferences for local production and other value-added label claims for a processed food product. *European Review of Agricultural Economics, 39(3),* 489-510.

Hunwick, J. (2003). The religious practices of black slaves in the Mediterranean Islamic world. In P. E. Lovejoy (Ed.), *Slavery on the frontiers of Islam* (pp. 149-172). Princeton, NJ: Markus Wiener.

Isager, S., & Skydsgaard, J. E. (1992). *Ancient Greek agriculture: An introduction.* London: Routledge.

Ito, M. (2015). 21 seiki Nishi Yōroppa deno sezokuka to saiseika［21 世紀西ヨーロッパでの世俗化と再聖化］. *Contemporary Religion 2015［現代宗教 2015］,* 249-269.

James, E. O. (1961). *Seasonal feasts and festivals*. New York, NY: Barnes & Noble, Inc..

Jensen, A. E. (1963). *Myth and cult among primitive peoples [Mythos und Kult bei Naturvolkern]* (M. T. Choldin & W. Weissleder, Trans.). Chicago, IL: The University of Chicago Press. (Original work published 1951)

Jongen, W. M. F., & Meulenberg, M. T. G. (Eds.). (2005). *Innovation in agri-food systems.* Wageningen: Wageningen Academic Publishers.

Kapellakis, I. E., Tsagarakis, K. P., & Crowther, J. C. (2008). Olive oil history: Production and by-product management. *Reviews in Environmental Science and Bio/Technology, 7*, 1-26.

Kambanis, P. (2006). Oil of gladness: Ritual use of oil in religious sources. In Hellenic Folklore Research Centre of the Academy of Athens (Ed.), *Ode to the olive tree* (pp. 126-153). Athens: General Secretariat for Olympic Utilization, Hellenic ministry of Culture.

Karapidakis, L., Yfantis, AR. (2006). Olive tree and olive oil in popular religious sentiment: A folklore approach. In Hellenic Folklore Research Centre of the Academy of Athens (Ed.), *Ode to the olive tree* (pp. 190-199). Athens: General Secretariat for Olympic Utilization, Hellenic ministry of Culture.

Kasai, K. (2003). Supirichuariti o tsukau hitobito［「スピリチュアリティ」を使う人々］. In Y. Yuasa (Ed.), *Supirichuariti no genzai［スピリチュアリティの現在］* (pp. 123-159). Kyoto: Jimbun Shoin.

Katz, R. (2003). Managing technological innovation in business organizations. In L. V. Shavinina (Ed.), *The international handbook on innovation* (pp. 775-789). Oxford: Elsevier Science Ltd.

Kerenyi, C. (1962). *The religion of the Greeks and Romans [Religion der Griechen und Romer]* (C. Holme, Trans.). New York, NY: E.P. Dutton.

Kerrou, M. (1998a). Autorité et sainteté: Perspectives historiques et socio-anthropologiques. In M. Kerrou (Ed.), *L'autorité des saints: Perspectives historiques et socio-anthropologiques en*

Méditerranée occidentale (pp. 11-37). Paris: Institut de Recherche sur le Maghreb Contemporain.

Kerrou, M. (1998b). Sainteté, savoir et autorité dans la cité Islamique de Kairouan. In M. Kerrou (Ed.), *L'autorité des saints: Perspectives historiques et socio-anthropologiques en Méditerranée occidentale* (pp. 219-237). Paris: Institut de Recherche sur le Maghreb Contemporain.

Keys, A., Aravanis, C., Blackburn, H. W., Van Buchem, F. S. P., Buzina, R., Djorjevic, B. S., …Taylor, H. L. (1966). Epidemiological studies related to coronary heart disease: Characteristics of men aged 40-59 in seven countries. *Acta medica Scandinavica. Supplementum., 460*, 1-392.

Keys, A., Mienotti, A., Karvonen, M. J., Aravanis, C., Blackburn, H., Buzina, R., ...Toshima, H. (1986). The diet and 15-year death rate in the seven countries study. *American Journal of Epidemiology*, *124*, 903-915.

Kimura, Y., & Sumiyoshi, M. (2009). Olive leaf extract and its main component oleuropein prevent chronic ultraviolet B radiation-induced skin damage and carcinogenesis in hairless mice. *The Journal of Nutrition, 139(11)*, 2079-2086.

Kitagawa, T. (2015). Transformation of olive related customs and olive-growing farms in North Africa. *Journal of Arid Land Studies*, *25(3)*, 157-160.

Kitagawa, T. (2017). Pilgrimage to old olive trees and saint veneration in North Africa. *International Journal of Arts and Humanities*, *5(8)*, 264-293.

Kitagawa, T. (2018). Saint veneration and nature symbolism in North Africa. *International Journal of Humanities and Cultural Studies*, *4(4)*, 117-139.

Kurabayasi, S. (1979). *Nihon no matsuri: Kokoro to katachi［日本の祭り・心と形］*. Tokyo: Shufunotomosya.

Latham, J., & Gardella, P. (2005). Food. In L. Jones (Ed.), *Encyclopedia of religion* (2nd ed.). (vol. 5, pp. 3167-3175). New York, NY: Thomson Gale.

Lagerkvist, C. J., & Hess, S. (2010). A meta-analysis of consumer willingness to pay for farm animal welfare. *European Review of Agricultural Economics*, *38 (1)*, 55-7.

Lancaster, K. J. (1966). A new approach to consumer theory. *The Journal of Political Economy*, *74(2)*, 132-157.

Lancaster, K. J. (1971). *Consumer demand: A new approach*. New York, NY: Columbia University Press.

Lane E. W. (1954, 1908). *The manners and customs of the modern Egyptians.* New York, NY: Dutton.

Langdon, S. (1914). *Tammuz and Ishtar: A monograph upon Babylonian religion and theology.* Oxford, Clarendon Press.

Laoust, E. (1920). *Mots et choses Berbères : Notes de linguistique et d'ethnographie dialectes du Maroc*. Paris: Augustin Challamel.

Larson, J. S. (1996). The World Health Organization's definition of health: Social versus spiritual health. *Social Indicators Research, 38,* 181-192.

Leach, E. (1961). Two essays concerning the symbolic representation of time. In *Rethinking anthropology* (pp. 124-136). London: The Athlone Press.

Leclerc-Madlala, S., Green, E., & Hallin, M. (2016). Traditional healers and the "Fast-Track" HIV response: Is success possible without them? *African Journal of AIDS Research, 15(2),* 185-193.

Lee, O. H., & Lee, B. Y. (2010). Antioxidant and antimicrobial activities of individual and combined phenolics in Olea europaea leaf extract. *Bioresource Technology, 101(10),* 3751-3754.

Leeuw, G. V. D. (1979). *Shūkyōgensyōgaku nyūmon［宗教現象学入門］[Einführung in die Phänomenologie der Religion]* (T. Tamaru & M. Ōtake, Trans.). Tokyo: University of Tokyo Press. (Original work published 1925)

Lévy-Bruhl, L. (1910). *Les fonctions mentales dans les sociétés inférieurs*. Paris: Les Presses universitaires de France.

Lévi-Strauss, C. (1963). *Structural anthropology [Anthropologie structurale]* (C. Jacobson & B. G. Shoepf, Trans.). New York, NY: Basic Books, Inc., Publishers. (Original work published 1958)

Lévi-Strauss, C. (1983). *The raw and the cooked [Le cru et le cuit]* (J. Weightman & D. Weitman, Trans.). Chicago, IL: The University of Chicago Press. (Original work published 1964)

Libaud, G. (1986). S*ymbolique del'espace et habitat chez les Beni-Aiïssa (Sud Tunisien)*. Paris: Centre de recherches et d'etudes sur les societes mediterraneennes.

Liphschitz, N., Gophna, R., Hartman, M., & Biger G. (1991) The beginning of olive (Olea europaea) cultivation in the old world: A reassessment. *Journal of Archeological Science*, *18*, 441-453.

Lombardi, A., Caracciolo, F., Cembalo, L., Lerro, M., & Lombardi, P. (2015). How does corporate social responsibility in the food industry matter? *New Medit, 10(3),* 2-19.

Louis, A., & Sironval, M. M. (1972). A Tamezredt, a 14 Km au Sud-Ouest de Matmata. *Revue de l'Occident Musulman et de la Méditerranée, 12*, 96-104.

Louis, A. (1973). Contacts entre culture "berbère" et culture arabe dans le Sud tunisien. In M. Galley (Ed.), *Proceedings of the first congress on Mediterranean studies of Arabo-Berber influence* (pp. 394-405). Algiers: Société Nationale d'Édition et de Difusion.

Louis, A. (1975). *Tunisie du sud: Ksars et villages de crêtes*. Paris: Centre de recherches et d'etudes sur les societes mediterraneennes.

Loukas, M. & Krimbas, C. B. (1983). History of olive cultivars based on their genetic distances. *Journal of Horticultural Science*, *58(1),* 121-127.

Loureiro, M. L., McClusley, J. J., & Mittelhammer, R. C. (2002). Will consumers pay a premium for eco-labeled apples? *Journal of Consumer Affairs, 36(2),* 203-219.

Loureiro, M. L., & Umberger, W. J. (2003). Estimating consumer willingness to pay for country-of-origin labeling. *Journal of Agricultural and Resource Economics*, *28(2)*, 287-301.

Loureiro, M. L., & Umberger, W. J. (2005). Assessing consumer preferences for country-of-origin labeling. *Journal of Agricultural and Applied Economics*, *37(1)*, 49-63.

Louviere, J. J., Hensher, D. A., & Swait, J. D. (2000). *Stated choice methods: Analysis and applications*. Cambridge: Cambridge University Press.

Luckmann, T. (1967). *The invisible religion: The problem of religion in modern society* (*Das Problem der Religion in der modernen Gesellschaft* 1963). London: McMillan.

Lusk, J. L., & Anderson, J. D. (2004). Effects of country-of-origin labeling on meat producers and consumers. *Journal of Agricultural and Resource Economics*, *29(2)*, 185-205.

Lusk, J. L., Nilsson, T., & Foster, K. (2007). Public preferences and private choices: Effect of altruism and free riding on demand for environmentally certified pork. *Environmental & Resource Economics*, *36(4)*, 499-521.

Mabiso, A., Sterns, J., House, L., & Wysocki, A. (2005). Estimating consumers' willingness-to-pay for country-of-origin labels in fresh apples and tomatoes: A double-hurdle probit analysis of American data using factor scores. Selected Paper prepared for presentation at the American Agricultural Economics Association Annual Meeting, Providence, Rhode Island, July 24-27, 2005. Retrieved from https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUKEwjlLWBofbdAhUPA4gKHV_TAHUQFjAAegQICRAB&url=https%3A%2F%2Fwww.researchgate.net%2Fpublication%2F23506158_Estimating_Consumers%2527_Willingness-To-Pay_for_Country-Of-Origin_Labels_in_Fresh_Apples_and_Tomatoes_A_Double-Hurdle_Probit_Analysis_of_American_Data_Using_Factor_Scores&usg=AOvVaw01ai9-GkUoEIxt49uLeIFB

McFadden, D. (1974). Conditional logit analysis of qualitative choice behavior. In P. Zarembka (Ed.), *Frontiers in Econometrics* (pp. 105-142). New York, NY: Academic Press.

Malamoud, C. (1996). *Cooking the world: Ritual & thought in ancient India*. Delhi: Oxford University Press.

Mardrus, J. C. (2004). *The book of the thousand nights and one night vol. I.* (E. Powys Mathers, Trans.). London: Routledge.

Marçais, W. & Guida, A. (1925). *Textes Arabes de Takroûna: Transcription, traduction annotee, glossaire.* Imprimerie Nationale, Paris: Ernst Leroux.

Marquet, L., Spera, E., Kuramochi, F., & Russ, J. M. (1996). *Yōroppa no syukusai*［ヨーロッパの祝祭］. F. Kuramochi (Ed.). Tokyo: Kawade Shobo Shinsha Publishers.

McGowan, A. (2005). Food, ritual, and power. In V. Burrus (Ed.), *A people's history of Christianity: Late ancient Christianity* (pp. 145-164). Minneapolis, MN: Augsburg Fortress.

McGregor, R. J. A. (1997). A sufi legacy in Tunis: Prayer and the Shadhiliyya. *International Journal of Middle East Studies, 29(2),* 255-277. Retrieved from https://doi.org/10.1017/S0020743800064497

Meigs, A. S. (1995). *Food, sex, and pollution: A New Guinea religion*. New Brunswick, NJ: Rutgers University Press.

Menapace, L., Colson, G., Grebitus, C., & Facendola, M. (2011). Consumers' preferences for geographical origin labels: Evidence from the Canadian olive oil market. *European Review of Agricultural Economics*, 38(2), 193-212.

Menouillard, H. (1912). Contribution à l'étude de l'origine de la popilation des montagnes de Matmata. *Revue Tunisienne, 91,* 21-34.

Mtimet, N., Ujiie, K., Kashiwagi, K., Zaibet, L., & Nagaki, M. (2011). The effects of Information and country of origin on Japanese olive oil consumer. Selected Paper for presentation at the EAAE 2011 Congress, August 30 to September 2, 2011 Zurich, Switzerland. Retrieved from http://ageconsearch.umn.edu/bitstream/114642/2/Mtimet_Nadhem_130.pdf

Moschis, G. P., & Ong, F. S. (2011). Religiosity and consumer behavior of older adults: A study of subcultural influences in Malaysia. *Journal of Consumer Behaviour, 10,* 8-17.

Moser, R., Raffaeli, R., & Thilmany-McFadden, D. (2011). Consumer preferences for fruits and vegetables with credence-based attributes: A review. *International Food and Agribusiness Management Review, 14(2),* 121-142.

Nagano, Y. (1973). Ijin Kantai［異人歓待］. In I. Oguchi & I. Hori (Eds.), *Shūkyōgaku jiten［宗教学辞典］*(pp. 19-20). Tokyo: University of Tokyo Press.

Nelson, P. (1970). Information and consumer behavior. *Journal of Political Economy, 78(2),* 311-329.

Nihei, K. (2014). Innovation cycle and economic development［イノベーションサイクルと経済発展］. *Keiai University Staff Press［敬愛大学研究論集］, 86*, 93-137.

Norman, C. E. (2012). Food and religion. In J. M. Pilcher (Ed.), *The Oxford handbook of food history*. London: Oxford University Press.

Ō, S. (王秀文) (2000). A study of the symbolism of peaches (I)［桃の民俗誌--そのシンボリズム（その一）］. *Bulletin of International Research Center for Japanese Studies［日本研究］, 17,* 11-45.

Onozaka, Y., & Mcfadden, D. T. (2011). Does local labeling complement or compete with other sustainable labels? A conjoint analysis of direct and joint values for fresh produce claim. *American Journal of Agricultural Economics, 93(3),* 693-706.

Ortega, D. L., Wang, H. H., Wu, L., & Olynk, N. J. (2011). Modeling heterogeneity in consumer preferences for select food safety attributes in China. *Food Policy, 36,* 318-324.

Otsuka, K. (1989). *Ibunka to shiteno Isurāmu［異文化としてのイスラーム］*. Tokyo: Dōbunkan.

Otto, R. (1936). *The idea of the Holy [Das Heilige]* (J. W. Harvey, Trans.). London: Oxford University Press. (Original work published 1923)

Parsons, T. (1966). *Societies: Evolutionary and comparative perspectives*. Englewood Cliffs, NJ: Prentice-Hall.

Perona, J. S., & Botham, K. M. (2013). Olive oil as a functional food: Nutritional and health benefits. In R. Aparicio, & J. Harwood (Eds.), *Handbook of olive oil* (pp. 677-714). New York, NY: Springer.

Polymerou-Kamilakis, A. (2006). The culture of olive tree. In D. Boskou (Ed.), *Olive oil: Chemistry and technology* (2nd ed.) (pp. 1-12). Champaign, IL: AOCS Press.

Puchalski, C. M., Lunsford, B., Harris, M. H., & Miller, R. T. (2006). Interdisciplinary spiritual care for seriously ill and dying patients: A collaborative model. *The Cancer Journal, 12(5)*, 398-416.

Puchalski, C. M., Blatt, B., Kogan, M., & Butler, A. (2014). Spirituality and health: The development of a field. *Academic Medicine*, 89 (1), 10-16.

Provotelle, P. (1911). *Étude sur la Tamazir't ou Zénatia de Qalaât es-Sened* (Tunisie). Paris: Ernest Leroux.

Reat M. R. The tree symbol in Islam, *Studies in Comparative Religion, 19(3)*. Retrieved from http://www.studiesincomparativereligion.com/uploads/ArticlePDFs/277.pdf

Redfield, R. (1955). The social organization of tradition. *The Far Eastern Quarterly, 15(1)*, 13-21.

Rekik, I., Salimonti, A., Grati Kamou, N., Muzzalupo, I., Lepais, O., Gerber, S., ... Rebai, A. (2008). Characterization and identification of Tunisian olive tree varieties by microsatellite markers. *HortScience, 43(5)*, 1371-1376.

Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). New York, NY, The Free Press.

Sáenz-Navajas, M. P., Ballester, J., Fernández-Zurbano, P., Ferreira, V., Peyron, D., & Valentin, D. (2016). Wine quality perception : A sensory point of view. In M. V. Moreno-Arribas, & B. B. Sualdea (Eds.), *Wine safety, consumer preference, and human health* (pp. 119-138). Cham: Springer.

Sekiyama, N. (1958). *Kinsei Nihon no jinkō kōzō［近世日本の人口構造］*. Tokyo: Yoshikawa Kōbundō.

Shah, S., Frey, R., Shipman, K., Gardiner, F., & Milne, H. (2018). A survey to explore health care staff perceptions of spirituality and spiritual care working in a single district health area in New Zealand. *European Journal of Integrative Medicine, 22,* 1-9.

Shavitt, S., & Cho, H. (2016). Culture and consumer behavior: The role of horizontal and vertical cultural factors. *Current Opinion in Psychology, 8*, 149-154.

Shumpeter, J. A. (1983). *The theory of economic development [Theorie der wirtschaftlichen Entwicklung]* (J. E. Elliot, Trans.*)*. New York, NY: Routledge. (Original work published 1934)

Smith, R. (1889). *Lectures on the religion of the Semites*. New York, NY: D. Appleton.

Snane, M. H., & Mechergui, M. (1996). Cultures pluviales des montagnes arides en Tunisie: Role et dimensionnement des jessours, *Sécheressen, 3(7)*, 203-208.

Sonoda, M. (1973). Matsuri［祭］. In I. Oguchi & I. Hori (Eds.), *Shūkyōgaku jiten［宗教学辞典］* (pp. 684-689). Tokyo: University of Tokyo Press.

Sonoda, M. (1990). *Matsuri no Genshōgaku［祭りの現象学］*. Tokyo: Koubundou Publishers Inc..

Stambolidis N., (2006). Prize in athletic games: Crown games and games with monetary prizes. In Hellenic Folklore Research Center of the Academy of Athens (Ed.), *Ode to the olive tree* (pp. 84-91). Athens: Hellenic Ministry of Culture.

Stepaniak, J. (1998). *The vegan sourcebook*. Los Angeles, CA: Lowell House.

Stephenson, D. E. (1976). Migration and community. In R. A. Stone & J. Simmons (Eds.), *Change in Tunisia: Studies in the social sciences* (pp. 107-119). New York, NY: State University of New York Press.

Street, R. A., Smith, M., Moshabela, M., Shezi, B., Webster, C., & Falkenberg, T. (2018). Traditional health practitioners and sustainable development: A case study in South Africa, *Public Health 165*, 1-5.

Strielkowski, W., Wang, J., & Platt, S. (2013). Consumer preferences for cultural heritage and tourism e-services: A case study of three European cities. *Trziste, 15(2)*, 161-176.

Sullivan, L. E. (1987). Worship of nature. In M. Eliade (Ed.), *Encyclopedia of religion* (vol. 10, pp. 324-337). New York, NY: Macmillan.

Takaki, K. (1992). *The Stambali: A black ritual group of Tunisia* (Project report of Grant-in-Aid for Scientific Research 02041098). Retrieved from the library of University of Tsukuba.

Takaki, K. (2000). *Kita-Afurika no seijya shinkō［北アフリカの聖者信仰］*. Tokyo: Tōsui Shobō.

Tanatsugu, M. (2015, 2005). Shūkyōgaku no hōhō to imi no tankyū［宗教学の方法と意味と探究］. In M. Tanatsugu & H. Yamanaka (Eds.), *Shūkyōgaku nyūmon［宗教学入門］* (pp. 143-153). Tokyo: Minerva Shobō.

Tarhouni, M., Ouled Belgacem, A., Neffati, M., & Chaieb, M. (2007). Dynamique des groupements végétaux dans une aire protégée de Tunisie méridionale. *Cahiers Agricultures, 16(1)*, 23-29.

Taussig, H. (2009). *In the beginning was the meal: Social experimentation and early Christianity identity*. Minneapolis, MN: Fortress Press.

Tempesta, T., Giancristofaro R. A., Corain L., Salmaso L., Tomasi D., & Boatto V. (2010). The importance of landscape in wine quality perception: An integrated approach using choice-based conjoint analysis and combination-based permutation tests. *Food Quality and Preference, 21*, 827-836.

Theoharides, T. (2007). US Patent No. US20070077317A1. Retrieved from https://patents.google.com/patent/US20070077317

Therios, I. (2009). *Olives*. Wallingford: CABI.

Thorsby, D. (2003). Determining the value of cultural goods: How much (or how little) does contingent valuation tell us? *Journal of Cultural Economics, 27*, 275-285.

Torelli, S. M., Merone, F., & Cavatorta, F. (2012). Salafism in Tunisia: Challenges and opportunities for democratization. *Middle East Policy, 19(4).* Retrieved from https://mepc.org/salafism-tunisia-challenges-and-opportunities-democratization

Torquati, B., Vigano, E., & Taglioni, C. (2016). Construction of alternative food networks for organic products: A case study of organized group of supply and demand. *New Medit, 15(4)*, 53-62.

Train, K. E. (2009). *Discrete choice methods with simulation*. Cambridge: Cambridge University Press.

Triandis, H. C. (1995). *Individualism and collectivism.* New York, NY: Routledge.

Triandis, H. C., & Gelfand, M. J. (1998). Converging measurement of horizontal and vertical individualism and collectivism. *Journal of Personality and Social Psychology, 74*, 118-128.

Troiano, S., Marangon, F., Tempesta, T., & Vecchiato, D. (2016). Organic vs local claims: Substitutes or complements for wine consumers? A marketing analysis with a discrete choice experiment. *New Medit, 15(2)*, 14-21.

Tsushiro, H. (2011). *Between social religion and otherworldly religion: The dead seen off and on［社会的宗教と他界定宗教のあいだ―見え隠れする死者］*. Tokyo: Sekaishisōsha.

Tuck, K. L., & Hayball, P. J. (2002). Major phenolic compounds in olive oil: Metabolism and health effects. *The Journal of Nutritional Biochemistry, 13*, 636-644.

Tully, S. M., & Winer, R. S. (2014). The role of the beneficiary in willingness to pay for socially responsible products: A meta-analysis. *Journal of Retailing, 90(2)*, 255-274.

Turner, V. (1969). *The ritual process: Structure and anti-structure*, New York, NY: Cornell University Press.

Tyree, E., & Stefanoudaki, E. (1996). The olive pit and Roman oil making. *The Biblical Archaeologist, 59(3)*, 171-178.

You, H., Jin, H., Khaldi, A., Kwak, M., Lee, T., Khaine, I., … Woo, S. (2016). Plant diversity in different bioclimatic zones in Tunisia. *Journal of Asia-Pacific Biodiversity, 9*, 56-62.

Vader, J. P. (2006). Spiritual health: The next frontier. *European Journal of Public Health, 16(5)*, 457.

Valavanis, P. (2006). Olive oil and the ancient Greeks. In Hellenic Folklore Research Centre of the Academy of Athens (Ed.), *Ode to the olive tree* (pp. 62-73). Athens: General Secretariat for Olympic Utilization, Hellenic ministry of Culture.

Venema, B. (1990). *Les Khroumirs: Changements politiques et religieux dans la période 1850-1987*, Amsterdam: VU University Press.

Visioli, F., & Galli, C. (1998). The effect of minor constituents of olive oil on cardiovascular disease:

New findings. *Nutrition Reviews, 56,* 142-147.

von Gruinebaum, G. E. (1955). *Unity and variety in Muslim civilization,* Chicago, IL: University of Chicago Press.

Waardenburg, J. D. D. (1979). Official and popular religion as a problem in Islamic studies. In P. H. Vrijhof & J. Waardenburg (Eds.), *Official and popular religion: Analysis of a theme for religious studies* (Religion and society series 19) (pp. 340-386). The Hague: Mouton.

Watanabe, L., & Merz, F. (2017). Tunisia's Jihadi problem and how to deal with it. *Middle East Policy, 24(4).* Retried from https://doi.org/10.1111/mepo.12312

Webber, M. (2005). *The protestant ethics and the spirit of capitalism [Die protestantische Ethik und der Geist des Kapitalismus]* (T. Parsons, Trans.). London: Routledge. (Original work published 1930)

West, M. A., & Altink, W. M. M. (1996). Innovation at work: Individual, group, organizational, and socio-historical perspectives, E*uropean Journal of Work and Organizational Psychology*, *5(1),* 3-11.

Westermarck, E. (1913). Ceremonies and beliefs connected with agriculture: certain dates of the solar year, and the weather. *Öfversigt af Finska Vetenskapssocietetens Förhandlingar*, *54(1)* Afd. B, 1-150.

Westermarck, E. (1926a). *Ritual and belief in Morocco vol. I.* London: MacMillan.

Westermarck, E. (1926b). *Ritual and belief in Morocco vol. II.* London: MacMillan.

Westermarck, E. (1933). *Pagan survivals in Mohammedan civilization*. London: MacMillan.

Wilson, B. (1966). *Religion in secular society*. London: Watts.

Wirgin, W. (1962). The Menorah as symbol of Judaism. *Israel Exploration Journal, 12(2),* 140-142.

Wünsche, A. (1905). *Das Sagen vom Lebensbaum und Lebenswasser: Altorientalische Mythen*. Leipzigh: Eduard Peeiffer.

X (author anonymous) (1910). L'anne agricole chez les indigenes de l'extrême-Sud Tunisien. *Revue Tunisienne, 79,* 3-6.

Yfantis, P. AR. (2006). Sacred oil: Symbolism and use of oil in orthodox tradition. In Hellenic Folklore Research Centre of the Academy of Athens (Ed.), *Ode to the olive tree* (pp. 118-125). Athens: General Secretariat for Olympic Utilization, Hellenic ministry of Culture.

Zbidi, H., Salido, S., Altarejos, J., Perez-Bonilla, M., Bartegi, A., Rosado, J. A., & Salido, G. M. (2009). Olive tree wood phenolic compounds with human platelet antiaggregant properties. *Blood Cells, Molecules, and Diseases, 42(3),* 279-285.

Zohary, D., & Spiege-Roy, P. (1975). Beginnings of fruit growing in the old world, *Science, 187,* 319-327.

Zoubir, Y. H. (2015). The democratic transition in Tunisia: A success story in the making, *Conflict Trends, 2015(1),* 10-17.

Zrries, O. (1987). Lord of the animals. In M. Eliade (Ed.), *Encyclopedia of religion* (vol. 9, pp. 22-25). NY: McMillan.

Zwemer, S. M. (1920). *The influence of Animism on Islam*. London: MacMillan.

Web Sites

Alvi, K. (2013). Islamists Make Sufi Shrines A Target in North Africa. *National Public Radio*, February 10, 2013, Retrieved from https://www.npr.org/sections/thetwo-way/2013/02/10/171508858/islamists-make-sufi-shrines-a-target-in-north-africa

Benoit-Lavelle, M. (2013). Tunisian Salafis on the Rise. *Al Monitor*, January 30, 2013, Retrieved from https://www.al-monitor.com/pulse/originals/2013/01/amenas-hostages-ennahda-accused-tolerating-islamist-violence.html

JIRCAS (2017). Retrieved from https://www.jircas.go.jp/ja/program/program_d/blog/20170626

Luck, T. (2018). How Tunisia's resilient Sufis have withstood hard-line Islamist attack. *The Christian Science Monitor*, March 7, 2018, Retrieved from https://www.csmonitor.com/World/Middle-East/2018/0307/How-Tunisia-s-resilient-Sufis-have-withstood-hard-line-Islamist-attack

News 24 (2013). More Sufi shrines torched in Tunisia. *News 24 Archive*, January 25, 2013, Retrieved from https://www.news24.com/Africa/News/More-Sufi-shrines-torched-in-Tunisia-20130124

Vidal, J. (2012). Food shortages could force world into vegetarianism, warn scientists. *The Guardian International Edit*, August,26 2012, Retrieved from https://www.theguardian.com/global-development/2012/aug/26/food-shortages-world-vegetarianism